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(54) **Title:** DRUG THERAPY FOR CELIAC SPRUE

(57) **Abstract:** Celiac Sprue and/or dermatitis herpetiformis are treated by interfering with HLA binding of immunogenic gluten peptides. The antigenicity of gluten oligopeptides and the ill effects caused by an immune response thereto are decreased by administration of an HLA-binding peptide inhibitor. Such inhibitors are analogs of immunogenic gluten peptides and (i) retain the ability to bind tightly to HLA molecules; (ii) retain the proteolytic stability of these peptides; but (iii) are unable to activate disease-specific T cells.

DRUG THERAPY FOR CELIAC SPRUE

CROSS-REFERENCE TO RELATED APPLICATIONS

[01]   This application claims priority to U.S. Provisional Application 60/380,761 filed May 14, 2002; to U.S. Provisional Application 60/392,782 filed June 28, 2002; and to U.S. Provisional application no. 60/422,933, filed October 31, 2002, and to U.S. Provisional Application 60/428,033, filed November 20, 2002, each of which are herein specifically incorporated by reference.

BACKGROUND OF THE INVENTION

[02]   In 1953, it was first recognized that ingestion of gluten, a common dietary protein present in wheat, barley and rye causes a disease called Celiac Sprue in sensitive individuals. Gluten is a complex mixture of glutamine- and proline-rich gliadin and glutenin molecules and is thought to be responsible for induction of Celiac Sprue. Ingestion of such proteins by sensitive individuals produces flattening of the normally luxurious, rug-like, epithelial lining of the small intestine known to be responsible for efficient and extensive terminal digestion of peptides and other nutrients. Other clinical symptoms of Celiac Sprue include fatigue, chronic diarrhea, malabsorption of nutrients, weight loss, abdominal distension, anemia, as well as an enhanced risk for the development of osteoporosis and intestinal malignancies such as lymphoma and carcinoma. The disease has an incidence of approximately 1 in 200 in European populations and is believed to be significantly under diagnosed in other populations.

[03]   A related disease is dermatitis herpetiformis, which is a chronic eruption of the skin characterized by clusters of intensely pruritic vesicles, papules, and urticaria-like lesions. IgA deposits occur in almost all normal-appearing and perilesional skin. Asymptomatic gluten-sensitive enteropathy is found in 75 to 90% of patients and in some of their relatives. Onset is usually gradual. Itching and burning are severe, and scratching often obscures the primary lesions with eczematization of nearby skin, leading to an erroneous diagnosis of eczema. Strict adherence to a gluten-free diet for prolonged periods may control the disease in some patients, obviating or reducing the requirement for drug therapy. Dapsone, sulfapyridine, and colchicines are sometimes prescribed for relief of itching.

[04]   Celiac Sprue (CS) is generally considered to be an autoimmune disease and the antibodies found in the serum of the patients support the theory that the disease is immunological in nature. Antibodies to tissue transglutaminase (TG2, tTGase or tTG) and gliadin appear in almost 100% of the patients with active CS, and the presence of such antibodies, particularly of the IgA class, has been used in diagnosis of the disease.

[05]   The large majority of patients express the HLA-DQ2 [DQ(a1*05, b1*02)] and/or DQ8 [DQ(a1*03, b1*0302)] molecules. It is believed that intestinal damage is caused by interactions between specific gliadin oligopeptides and the HLA-DQ2 or DQ8 antigen, which in turn induce proliferation of T lymphocytes in the sub-epithelial layers. T helper 1 cells and cytokines apparently play a major role in a local inflammatory process leading to villous atrophy of the small intestine.

[06]   At the present time, there is no good therapy for the disease, except to avoid completely all foods containing gluten. Although gluten withdrawal has transformed the prognosis for children and substantially improved it for adults, some people still die of the disease, mainly adults who had severe disease at the outset. A leading cause of death is lymphoreticular disease, especially intestinal lymphoma. It is not known whether a gluten-free diet diminishes this risk. Apparent clinical remission is often associated with histologic relapse that is detected only by review biopsies or by increased titers of antibodies to tTGase (also called EMA antibodies).

[07]   Gluten is so widely used, for example, in commercial soups, sauces, ice creams, hot dogs, and other foodstuffs, that patients need detailed lists of foodstuffs to avoid and expert advice from a dietitian familiar with celiac disease. Ingesting even small amounts of gluten may prevent remission or induce relapse. Supplementary vitamins, minerals, and hematinics may also be required, depending on deficiency. A few patients respond poorly or not at all to gluten withdrawal, either because the diagnosis is incorrect or because the disease is refractory. In the latter case, oral corticosteroids (e.g., prednisone 10 to 20 mg bid) may induce response.

[08]   In view of the serious and widespread nature of Celiac Sprue and the difficulty of removing gluten from the diet, better methods of treatment are of great interest. In particular, there is a need for treatment methods that allow the Celiac Sprue individual to eat gluten-containing foodstuffs without ill effect or at least to tolerate such foodstuffs in small or moderate quantities without inducing relapse. The present invention meets this need for better therapies for Celiac Sprue.

SUMMARY OF THE INVENTION

[09]   In one aspect, the present invention provides methods for treating Celiac Sprue and/or dermatitis herpetiformis and the symptoms thereof by administration of an HLA-binding peptide inhibitor to the patient. In one embodiment, the HLA-binding peptide inhibitor employed in the method is an analog of an immunogenic gluten peptide, where an immunogenic gluten peptide is altered by the replacement of one or more amino acids, where the replacement may be another naturally occurring amino acid, non-naturally occurring amino acids, modified amino acids, amino acid mimetics, and the like. Analogs of

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immunogenic gluten peptides that (i) retain the ability to bind tightly to HLA molecules; (ii) retain the proteolytic stability of these peptides; but (iii) are unable to activate disease-specific or other T cells, are useful agents to treat Celiac Sprue.

[10]   In another aspect, the present invention provides novel HLA-binding peptide inhibitors and methods for treating Celiac Sprue and/or dermatitis herpetiformis by administering those compounds.

[11]   In another aspect, the invention provides pharmaceutical formulations comprising an HLA-binding peptide inhibitor and a pharmaceutically acceptable carrier. In one embodiment, such formulations comprise an enteric coating that allows delivery of the active agent to the intestine, and the agents are stabilized to resist digestion or acid-catalyzed modification in acidic stomach conditions. In another embodiment, the formulation also comprises one or more glutenases, as described in U.S. Provisional Application 60/392,782 filed June 28, 2002; and U.S. Provisional Application 60/428,033, filed November 20, 2002, both of which are incorporated herein by reference. The invention also provides methods for the administration of enteric formulations of one or more HLA-binding peptide inhibitors to treat Celiac Sprue.

[12]   In another aspect, the invention provides methods for screening candidate compounds to determine their suitability for use in the subject methods, by assessing the ability of a candidate agent for its ability to bind to HLA molecules, and/or to inhibit the activity of T cells reactive against gluten antigens.

[13]   Methods and compositions are provided for modeling the structure of a soluble (extracellular) domain of human HLA-DQ2 bound to an immunodominant gluten epitope, and for identifying molecules that will compete with the gluten peptide for MHC binding. In one embodiment, the methods of the invention utilize structural modeling, and the identification and design of molecules having a particular structure. The structural data provided herein is used for the rational design of drugs that affect immune system activation in Celiac Sprue and/or dermatitis herpetiformis. Analysis of the crystal structure in conjunction with sequence data identifies residues in the immunogenic gluten peptide that are important for interaction with the MHC molecule, and those that are accessible for interaction with the T cell antigen receptor. This information provides a basis for rational drug design.

[14]   These and other aspects and embodiments of the invention and methods for making and using the invention are described in more detail in the description of the drawings and the invention, the examples, the claims, and the drawings that follow.

DETAILED DESCRIPTION OF THE EMBODIMENTS

[15]   Celiac Sprue and/or dermatitis herpetiformis are treated by interfering with HLA binding of immunogenic gluten peptides. Therapeutic benefit can be enhanced in some individuals by increasing the digestion of gluten oligopeptides, whether by pretreatment of foodstuffs to be ingested or by administration of an enzyme capable of digesting the gluten oligopeptides, together with administration of an HLA-binding peptide inhibitor. Gluten oligopeptides are highly resistant to cleavage by gastric and pancreatic peptidases such as pepsin, trypsin, chymotrypsin, and the like, and their prolonged presence in the digestive tract can induce an autoimmune response. The antigenicity of gluten oligopeptides and the ill effects caused by an immune response thereto can be decreased by administration of an HLA-binding peptide inhibitor. Such inhibitors are analogs of immunogenic gluten peptides and (i) retain the ability to bind tightly to HLA molecules; (ii) retain the proteolytic stability of these peptides; but (iii) are unable to activate disease-specific or other T cells.

[16]   Methods and compositions are provided for the administration of one or more HLA-binding peptide inhibitors to a patient suffering from Celiac Sprue and/or dermatitis herpetiformis. In some embodiments and for some individuals, the methods of the invention remove the requirement that abstention from ingestion of glutens be maintained to keep the disease in remission. The compositions of the invention include formulations of tTGase inhibitors that comprise an enteric coating that allows delivery of the agents to the intestine in an active form; the agents are stabilized to resist digestion or alternative chemical transformations in acidic stomach conditions. In another embodiment, food is pretreated or combined with glutenase, or a glutenase is co-administered (whether in time or in a formulation of the invention) with an HLA-binding peptide inhibitor of the invention.

[17]   The subject methods are useful for both prophylactic and therapeutic purposes. Thus, as used herein, the term "treating" is used to refer to both prevention of disease, and treatment of a pre-existing condition. The treatment of ongoing disease, to stabilize or improve the clinical symptoms of the patient, is a particularly important benefit provided by the present invention. Such treatment is desirably performed prior to loss of function in the affected tissues; consequently, the prophylactic therapeutic benefits provided by the invention are also important. Evidence of therapeutic effect may be any diminution in the severity of disease, particularly diminution of the severity of such symptoms as fatigue, chronic diarrhea, malabsorption of nutrients, weight loss, abdominal distension, and anemia. Other disease indicia include the presence of antibodies specific for glutens, antibodies specific for tissue transglutaminase, the presence of pro-inflammatory T cells and cytokines, and degradation of the villus structure of the small intestine. Application of the methods and compositions of the invention can result in the improvement of any and all of these disease indicia of Celiac Sprue.

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[18]   Patients that can benefit from the present invention include both adults and children. Children in particular benefit from prophylactic treatment, as prevention of early exposure to toxic gluten peptides can prevent development of the disease into its more severe forms. Children suitable for prophylaxis in accordance with the methods of the invention can be identified by genetic testing for predisposition, e.g. by HLA typing; by family history, and by other methods known in the art. As is known in the art for other medications, and in accordance with the teachings herein, dosages of the HLA-binding peptide inhibitors of the invention can be adjusted for pediatric use.

[19]   Because most proteases and peptidases are unable to hydrolyze the amide bonds of proline residues, the abundance of proline residues in gliadins and related proteins from wheat, rye and barley can constitute a major digestive obstacle for the enzymes involved. This leads to an increased concentration of relatively stable gluten derived oligopeptides in the gut. These stable gluten derived oligopeptides, called "immunogenic oligopeptides" herein, bind to MHC molecules, including HLA HLA-DQ2 or DQ8 molecules, to stimulate an immune response that results in the autoimmune disease aspects of Celiac Sprue. In some cases the enzyme tissue transglutaminase selectively deamidates certain glutamine residues in these peptides, thereby enhancing their potency for the DQ2 ligand binding pocket.

[20]   HLA-binding peptide inhibitors of the present invention are analogs of immunogenic gluten oligopeptides that (i) retain the ability to bind tightly to HLA molecules; (ii) retain the proteolytic stability of these peptides; but (iii) are unable to activate disease-specific or other T cells. The inhibitor may comprise oligomers of analogs. Multivalent gluten derived epitopes have markedly enhanced immunogenicity. Consequently, multivalent oligopeptides analogs can also be expected to have increased potency for MHC molecules. In addition, these longer peptides can be more resistant toward intestinal brush border proteolysis.

[21]   An immunogenic gluten oligopeptide analog is an analog of a peptide that comprises at least about 8 residues, and may comprise at least about 10 residues; at least about 11 residues, at least about 12 residues, at least about 13 residues, at least about 14 residues, or more, where the term "residue" refers to naturally occurring amino acids, non-naturally occurring amino acids, and amino acid mimetics or derivatives; and where the gluten peptide is altered by the replacement of one or more amino acids. The replacement may be another naturally occurring amino acid, non-naturally occurring amino acids, modified amino acids, amino acid mimetics, and the like; and may further be derivitized to further reduce the affinity of these ligands for disease-specific T cell receptors. The sequence of immunogenic gluten oligopeptides can be determined by one of skill in the art. Immunogenic gliadin oligopeptides are peptides derived during normal human digestion of gliadins and related storage proteins as described above, from dietary cereals, e.g. wheat, rye, barley, and the

like. Such oligopeptides act as antigens for T cells in Celiac Sprue. For binding to Class II MHC proteins, immunogenic peptides are usually from about 8 to 20 amino acids in length, more usually from about 10 to 18 amino acids. Such peptides may include PXP motifs, such as the motif PQPQLP. Determination of whether an oligopeptide is immunogenic for a particular patient is readily determined by standard T cell activation and other assays known to those of skill in the art.

[22]   Among gluten proteins with potential harmful effect to Celiac Sprue patients are included the storage proteins of wheat, species of which include *Triticum aestivum; Triticum aethiopicum; Triticum baeoticum; Triticum militinae; Triticum monococcum; Triticum sinskajae; Triticum timopheevii; Triticum turgidum; Triticum urartu, Triticum vavilovii; Triticum zhukovskyi; etc.* A review of the genes encoding wheat storage proteins may be found in Colot (1990) Genet Eng (N Y) **12**:225-41. Gliadin is the alcohol-soluble protein fraction of wheat gluten. Gliadins are typically rich in glutamine and proline, particularly in the N-terminal part. For example, the first 100 amino acids of α- and γ-gliadins contain ~35% and ~20% of glutamine and proline residues, respectively. Many wheat gliadins have been characterized, and as there are many strains of wheat and other cereals, it is anticipated that many more sequences will be identified using routine methods of molecular biology. Examples of gliadin sequences include but are not limited to wheat alpha gliadin sequences, for example as provided in Genbank, accession numbers AJ133612; AJ133611; AJ133610; AJ133609; AJ133608; AJ133607; AJ133606; AJ133605; AJ133604; AJ133603; AJ133602; D84341.1; U51307; U51306; U51304; U51303; U50984; and U08287. A sequence of wheat omega gliadin is set forth in Genbank accession number AF280605.

[23]   Among the immunogenic gluten oligopeptides that may be modified to generate an HLA-binding peptide inhibitor are included the peptide sequence QLQPFPQPELPYP; the sequence PQPELPY; the sequence PFPQPELPYP, PQPELPYPQPQLP, PQQSFPEQQPP, VQGQGIIQPEQPAQ, FPEQPQQPYPQQP, FPQQPEQPYPQQP, FSQPEQEFPQPQ and longer peptides containing such sequences or multiple copies of such sequences. Gliadins, secalins and hordeins contain several PQPQLPY sequences or sequences similar thereto rich in Pro-Gln residues that are high-affinity substrates for tTGase. The tTGase catalyzed deamidation of such sequences increases their affinity for HLA-DQ2, the class II MHC allele present in >90% Celiac Sprue patients. Presentation of these deamidated sequences by DQ2 positive antigen presenting cells effectively stimulates proliferation of gliadin-specific T cells from intestinal biopsies of most Celiac Sprue patients, providing evidence for the proposed mechanism of disease progression in Celiac Sprue.

[24]   Analog oligopeptides of the invention comprise at least one difference in amino acid sequence from a native gluten peptide, by the replacement of an amino acid with a different

amino acid; a non-naturally occurring amino acid, a peptidomimetics, substituted amino acid, and the like. An L-amino acid from the native peptide may be altered to any other one of the 20 L-amino acids commonly found in proteins, any one of the corresponding D-amino acids, rare amino acids, such as 4-hydroxyproline, and hydroxylysine, or a non-protein amino acid, such as β-alanine, ornithine and homoserine. Also included with the scope of the present invention are amino acids that have been altered by chemical means such as methylation (e.g., α-methylvaline), deamidation, amidation of the C-terminal amino acid by an alkylamine such as ethylamine, ethanolamine, and ethylene diamine, and acylation or methylation of an amino acid side chain function (e.g., acylation of the epsilon amino group of lysine), deimination of arginine to citrulline, isoaspartylation, or phosphorylation on serine, threonine, tyrosine or histidine residues. Importantly, each of these altered amino acids provide a functional handle, e.g. amine, alcohol, aryl halide, and the like, which can be regioselectively derivatized to further reduce the affinity of these ligands for disease-specific T cell receptors. Peptide analogs may be further derivatized with substitutions, including, without limitation, ethers, amines, esters, amides, carbonates, carbamates, carbazates, ureas and C-C coupled derivatives. Other examples include oxidation of alcohols to ketones, followed by further modifications of the resulting carbonyl group, e.g. via preparation of oximes) or the carbon atom adjacent to the ketone. Such derivatives are encompassed by the term "analog".

[25]   The proteolytic stability of gluten oligopeptides can be attributed, at least in part, to the presence of PXP motifs, which are resistant to enzymatic degradation. Preferred analogs of immunogenic gluten oligopeptides will comprise one or more proline residues, and may comprise one or more PXP motifs.

[26]   An immunogenic gluten peptide of particular interest is the 33-mer LQLQPFPQPQLPYPQPQLPYPQPQLPYPQPQPF, which is described in detail in International Patent Application US03/04743, herein specifically incorporated by reference. This peptide is both immunogenic and highly stable to proteases. T cell epitopes present in the 33-mer peptide include, inter alia, PFPQPQLPY, PQPQLPYPQ, PFPQPELPY; PQPELPYPQ; PYPQPELPY and PYPQPQLPY. In one embodiment of the invention, the immunogenic gluten oligopeptide analog is an analog of a peptide that comprises at least one T cell epitope selected from the group consisting of PFPQPQLPY, PQPQLPYPQ, PFPQPELPY; PQPELPYPQ; PYPQPELPY and PYPQPQLPY.

[27]   The structure of an immunogenic gluten oligopeptide bound to a presenting molecule, e.g. HLA-DQ2; HLA-DQ8; etc. can be determined, e.g. by crystallography, NMR, etc., and used to identify residues in a peptide that are involved in the binding to the MHC molecule, and that are involved in the binding to a T cell antigen receptor. Residues identified as accessible for interacting with the T cell receptor may be modified to decrease

the interaction, *e.g.* by increasing steric hindrance, altering hydrophilicity or hydrophobicity, *etc.* Residues identified as involved in interaction with the binding cleft of an MHC molecule may be modified to increase the interaction, *e.g.* by incorporating amino acids known to interact strongly with the binding cleft.

[28]   One inhibitor of interest is an oligopeptide or peptidomimetic that comprises the sequence PXPQPELPY, where X is Gly, Ala, Tyr, Trp, Arg, Lys, p-iodo-Phe, 3-iodo-Tyr, p-amino-Phe, 3-amino-Tyr, hydroxylysine, ornithine, Asp, Glu, or any residue that is substantially bulkier or hydrophilic than Phe. Examples of suitable modifications include ethers, amines, esters, amides, carbonates, carbamates, carbazates, ureas and C-C coupled derivatives. Other examples include oxidation of alcohols to ketones, followed by further modifications of the resulting carbonyl group (e.g. via preparation of oximes) or the carbon atom adjacent to the ketone. The peptide may comprise modifications that increase binding potency to an MHC molecule, by varying residues that facilitate peptide docking into the binding cleft.   Examples of such residues include Gln-4, Glu-6, Leu-7, and Tyr-9 (numbering based on the epitope PFPQPELPY). Each of these residues interacts closely with several residues in the DQ2 binding pocket. By using structure-based molecular design methods, these interactions can be optimized.

[29]   Another inhibitor of interest is a oligopeptide or peptidomimetic that comprises the sequence PFPQX$_1$ELX$_2$Y, where X$_1$ and X$_2$ are independently selected from 4-hydroxy-Pro (either isomer at C-4), 4-amino-Pro (either isomer atC-4), or 3-hydroxy-Pro (either isomer atC-3), and proline, with the proviso that at least one of X$_1$ and X$_2$ is a residue other than proline.

[30]   Peptides and peptide analogs may be synthesized by standard chemistry techniques, including synthesis by automated procedure. In general, peptide analogs are prepared by solid-phase peptide synthesis methodology which involves coupling each protected amino acid residue to a resin support, preferably a 4-methylbenzhydrylamine resin, by activation with dicyclohexylcarbodiimide to yield a peptide with a C-terminal amide. Alternatively, a chloromethyl resin (Merrifield resin) may be used to yield a peptide with a free carboxylic acid at the C-terminus. After the last residue has been attached, the protected peptide-resin is treated with hydrogen fluoride to cleave the peptide from the resin, as well as deprotect the side chain functional groups. Crude product can be further purified by gel filtration, HPLC, partition chromatography, or ion-exchange chromatography.

[31]   The present invention provides crystals and structures of HLA-DQ2 bound to antigen, where the antigen is an immunogenic gluten peptide QLQPFPQPELPYP, which may be referred to for brevity as an "HLA-DQ2/peptide complex". The structures and structural coordinates are useful in structural homology deduction, and in developing and

screening agents that affect the gluten antigen presentation and immunogenicity. The structure information may be provided in a computer readable form, *e.g.* as a database of atomic coordinates, or as a three-dimensional model. The structures are useful, for example, in modeling interactions of the HLA molecule with the antigen, effect of inhibitors, *etc.* The structures are also used to identify molecules that bind to or otherwise interact with structural elements. One aspect of the present invention provides crystals of the HLA-DQ2/peptide complex, which can effectively diffract X-rays for the determination of the atomic coordinates.

[32]   The present invention further includes methods of using the structural information provided herein to derive a detailed structure of related peptide binding interactions, particularly other gluten peptides, or analogs and mimetics thereof. Such structural homology determination may utilize modeling, alone or in combination with structure determination.

[33]   The present invention provides three-dimensional coordinates for the HLA-DQ2/peptide complex. Such a data set may be provided in computer readable form. Methods of using such coordinates (including in computer readable form) in drug assays and drug screens as exemplified herein, are also part of the present invention. In a particular embodiment of this type, the coordinates contained in the data set can be used to identify potential modulators of the HLA-DQ2/peptide complex, including molecules that mimic the binding of the peptide to the HLA molecule, but which lack, or are substantially diminished in the ability to stimulate a T cell response.

[34]   In one embodiment, a potential agent for modulation of HLA-DQ2/peptide complex is selected by performing rational drug design with the three-dimensional coordinates determined for the crystal structures. Preferably the selection is performed in conjunction with computer modeling. Rational design may also be used in the genetic modification of immunogenic peptides by modeling the potential effect of a change in the amino acid sequence.

[35]   Computer analysis may be performed with one or more of the computer programs including: GRASP, O (Jones *et al.* (1991) Acta Cryst. A47:110); QUANTA, CHARMM, INSIGHT, SYBYL, MACROMODEL; ICM, and CNS (Brunger *et al.* (1998) Acta Cryst. D54:905). In a further embodiment of this aspect of the invention, an initial drug screening assay is performed using the three-dimensional structure so obtained, preferably along with a docking computer program. Such computer modeling can be performed with one or more Docking programs such as DOC, GRAM and AUTO DOCK. See, for example, Dunbrack *et al.* (1997) Folding & Design 2:27-42.

[36]   It should be understood that in the drug screening and protein modification assays provided herein, a number of iterative cycles of any or all of the steps may be performed to

optimize the selection. For example, assays and drug screens that monitor the activity of the T cells in the presence and/or absence of a potential inhibitor are also included in the present invention and can be employed as an assay or drug screen, usually as a single step in a multi-step protocol.

[37]   The structure of the HLA-DQ2/peptide complex is useful in the design of agents that mimic the activity and/or specificity of the binding interaction. The structures encoded by the data may be computationally evaluated for an ability to associate with chemical entities. This provides insight into an element's ability to associate with chemical entities. Chemical entities that are capable of associating with these domains may alter immunogenicity. Such chemical entities are potential drug candidates. Alternatively, the structure encoded by the data may be displayed in a graphical format. This allows visual inspection of the structure, as well as visual inspection of the structure's association with chemical entities.

[38]   In one embodiment of the invention, an invention is provided for evaluating the ability of a chemical entity to associate with any of the molecules or molecular complexes set forth above. This method comprises the steps of employing computational means to perform a fitting operation between the chemical entity and the interacting surface of the polypeptide or nucleic acid; and analyzing the results of the fitting operation to quantify the association. The term "chemical entity", as used herein, refers to chemical compounds, complexes of at least two chemical compounds, and fragments of such compounds or complexes. Molecular design techniques are used to design and select chemical entities, including inhibitory compounds, capable of binding to the HLA molecule, or to the gluten peptide. Such chemical entities may interact directly with certain key features of the structure.

[39]   It will be understood by those skilled in the art that not all of the atoms present in a significant contact residue need be present in a competitive binding agent. In fact, it is only those few atoms that shape the loops and actually form important contacts that are likely to be important for activity. Those skilled in the art will be able to identify these important atoms based on the structure model of the invention, which can be constructed using the structural data herein.

[40]   The design of compounds that bind to HLA-DQ2 according to this invention generally involves consideration of two factors. First, the compound must be capable of either competing for binding with an immunogenic gluten peptide; or physically and structurally associating with the HLA-DQ2 domains. Non-covalent molecular interactions important in this association include hydrogen bonding, van der Waals interactions, hydrophobic interactions and electrostatic interactions.

[41]   The compound must be able to assume a conformation that allows it to interact with the binding pocket. Although certain portions of the compound will not directly participate in

these associations, those portions may still influence the overall conformation of the molecule. This, in turn, may have a significant impact on potency. Such conformational requirements include the overall three-dimensional structure and orientation of the chemical entity in relation to all or a portion of the binding pocket, or the spacing between functional groups of an entity comprising several interacting chemical moieties.

[42]   Computer-based methods of analysis fall into two broad classes: database methods and *de novo* design methods. In database methods the compound of interest is compared to all compounds present in a database of chemical structures and compounds whose structure is in some way similar to the compound of interest are identified. The structures in the database are based on either experimental data, generated by NMR or x-ray crystallography, or modeled three-dimensional structures based on two-dimensional data. In *de novo* design methods, models of compounds whose structure is in some way similar to the compound of interest are generated by a computer program using information derived from known structures, *e.g.* data generated by x-ray crystallography and/or theoretical rules. Such design methods can build a compound having a desired structure in either an atom-by-atom manner or by assembling stored small molecular fragments. Selected fragments or chemical entities may then be positioned in a variety of orientations, or docked, within the interacting surface of the RNA. Docking may be accomplished using software such as Quanta (Molecular Simulations, San Diego, CA) and Sybyl, followed by energy minimization and molecular dynamics with standard molecular mechanics force fields, such as CHARMM and AMBER.

[43]   Specialized computer programs may also assist in the process of selecting fragments or chemical entities. These include: SmoG, GRID (Goodford (1985) J. Med. Chem., 28, pp. 849-857; Oxford University, Oxford, UK; MCSS (Miranker *et al.* (1991) Proteins: Structure, Function and Genetics, 11, pp. 29-34; Molecular Simulations, San Diego, CA); AUTODOCK (Goodsell *et al.*, (1990) Proteins: Structure, Function, and Genetics, 8, pp. 195-202; Scripps Research Institute, La Jolla, Calif.); and DOCK (Kuntz *et al.* (1982) J. Mol. Biol., 161:269-288; University of California, San Francisco, Calif.)

[44]   Once suitable chemical entities or fragments have been selected, they can be assembled into a single compound or complex. Assembly may be preceded by visual inspection of the relationship of the fragments to each other on the three-dimensional image displayed on a computer screen in relation to the structure coordinates. Useful programs to aid one of skill in the art in connecting the individual chemical entities or fragments include: CAVEAT (Bartlett *et al.* (1989) In Molecular Recognition in Chemical and Biological Problems", Special Pub., Royal Chem. Soc., 78, pp. 182-196; University of California, Berkeley, Calif.); 3D Database systems such as MACCS-3D (MDL Information Systems, San Leandro, Calif); and HOOK (available from Molecular Simulations, San Diego, CA).

[45]   Other molecular modeling techniques may also be employed in accordance with this invention. See, e.g., N. C. Cohen et al., "Molecular Modeling Software and Methods for Medicinal Chemistry, J. Med. Chem., 33, pp. 883-894 (1990). See also, M. A. Navia et al., "The Use of Structural Information in Drug Design", Current Opinions in Structural Biology, 2, pp. 202-210 (1992).

[46]   Once the binding entity has been optimally selected or designed, as described above, substitutions may then be made in some of its atoms or side groups in order to improve or modify its binding properties. Generally, initial substitutions are conservative, i.e., the replacement group will have approximately the same size, shape, hydrophobicity and charge as the original group. It should, of course, be understood that components known in the art to alter conformation should be avoided. Such substituted chemical compounds may then be analyzed for efficiency of fit by the same computer methods described above.

[47]   Another approach made possible and enabled by this invention, is the computational screening of small molecule databases. In this screening, the quality of fit of such entities to the binding site may be judged either by shape complementarity or by estimated interaction energy. Generally the tighter the fit, the lower the steric hindrances, and the greater the attractive forces, the more potent the potential modulator since these properties are consistent with a tighter binding constant. Furthermore, the more specificity in the design of a potential drug the more likely that the drug will not interact as well with other proteins. This will minimize potential side effects due to unwanted interactions with other proteins.

[48]   Compounds of interest can be systematically modified by computer modeling programs until one or more promising potential analogs are identified. In addition systematic modification of selected analogs can then be systematically modified by computer modeling programs until one or more potential analogs are identified. Alternatively a potential modulator could be obtained by initially screening a random peptide library, for example one produced by recombinant bacteriophage. A peptide selected in this manner would then be systematically modified by computer modeling programs as described above, and then treated analogously to a structural analog.

[49]   Once a potential modulator/inhibitor is identified it can be either selected from a library of chemicals as are commercially available from most large chemical companies including Merck, GlaxoWelcome, Bristol Meyers Squib, Monsanto/Searle, Eli Lilly, Novartis and Pharmacia UpJohn, or alternatively the potential modulator may be synthesized *de novo*. The *de novo* synthesis of one or even a relatively small group of specific compounds is reasonable in the art of drug design.

[50]   The success of both database and *de novo* methods in identifying compounds with activities similar to the compound of interest depends on the identification of the functionally

relevant portion of the compound of interest. For drugs, the functionally relevant portion may be referred to as a pharmacophore, *i.e.* an arrangement of structural features and functional groups important for biological activity. Not all identified compounds having the desired pharmacophore will act as a modulator of inflammation. The actual activity can be finally determined only by measuring the activity of the compound in relevant biological assays. However, the methods of the invention are extremely valuable because they can be used to greatly reduce the number of compounds that must be tested to identify an actual inhibitor.

[51]   In order to determine the biological activity of a candidate pharmacophore it is preferable to measure biological activity at several concentrations of candidate compound. The activity at a given concentration of candidate compound can be tested in a number of ways.

[52]   For example, an HLA molecule can be attached to a solid support. Methods for placing proteins on a solid support are well known in the art and include such steps as linking biotin to the protein, and linking avidin to the solid support. The solid support can be washed to remove unreacted species. A solution of a labeled candidate agent can be contacted with the solid support. The solid support is washed again to remove the potential modulator not bound to the support. The amount of labeled potential modulator remaining with the solid support and thereby bound to the protein can be determined. Alternatively, or in addition, the dissociation constant between the labeled candidate agent and the protein can be determined.

[53]   Crystals of the binding complex of the present invention can be grown by a number of techniques including batch crystallization, vapor diffusion (either by sitting drop or hanging drop) and by microdialysis. Seeding of the crystals in some instances is required to obtain X-ray quality crystals. Standard micro and/or macro seeding of crystals may therefore be used. The crystals may be shrunk by transfer into solutions of different composition, *e.g.* by the addition of metal ions such as Mn^{2+}, Pb^{2+}, *etc.* Crystals may also be generated that include cofactors, substrates, candidate inhibitors, and the like, that interact with the protein, *e.g.* by cocrystallization of soaking protein crystals in a solution comprising an inhibitor or other agent.

[54]   Alternative methods may also be used. For example, crystals can be characterized by using X-rays produced in a conventional source (such as a sealed tube or a rotating anode) or using a synchrotron source. Methods of characterization include, but are not limited to, precision photography, oscillation photography and diffractometer data collection. Selenium-methionine may be used as described in the examples provided herein, or alternatively a heavy metal derivative data set (e.g., using PCMB) may be used in place of the selenium-methionine derivatization.

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[55]   Electron density maps may be built from crystals using phase information from multiple isomorphous heavy-atom derivatives, molecular replacement or selenomethionine incorporated multiwavelength anomalous disperson technique. Model building is facilitated by the use of sequence markers, especially selenomethionine residues. Anomalous difference Fourier maps may be calculated with data from selenomethionine-substituted HLA-DQ2/ GLUTEN EPITOPE and with experimental multiple isomorphous replacement with anomalous scattering (MIRAS) phases (Hemming and Edwards (2000) J. Biol. Chem. 275:2288). Maps are improved by phase combination, where MIRAS phases are combined by the program SIGMAA (Jones et al., supra.) Phase combination may be followed by solvent flattening with DM (Carson (1997) Methods Enzymol. 277:493). Improved maps may be obtained by combination of the MIRAS phases with improved phases from combined polyalanine and atomic models in an iterative process. The model can be refined by classical positional and B-factor minimization, and with manual rebuilding.

[56]   HLA-DQ2/peptide complex structure models and databases of structure information are provided. The structural models find use in determining the structure of related and/or analogous peptide complexes. In some cases, modeling will be based on the provided structure. In other embodiments, modeling will utilize the provided structure in combination with features present in homologous and/or related structures, where relationship may be defined by protein sequence similarity, or structural similarity, e.g. in the presence of specific features as described above.

[57]   The structure model may be implemented in hardware or software, or a combination of both. For most purposes, in order to use the structure coordinates generated for the structure, it is necessary to convert them into a three-dimensional shape. This is achieved through the use of free or commercially available software that is capable of generating three-dimensional graphical representations of molecules or portions thereof from a set of structure coordinates.

[58]   In one embodiment of the invention, a machine-readable storage medium is provided, the medium comprising a data storage material encoded with machine readable data which, when using a machine programmed with instructions for using said data, is capable of displaying a graphical three-dimensional representation of any of the structures of this invention that have been described above. Specifically, the computer-readable storage medium is capable of displaying a graphical three-dimensional representation of the HLA-DQ2/peptide complex.

[59]   Thus, in accordance with the present invention, data providing structural coordinates, alone or in combination with software capable of displaying the resulting three dimensional structure of the complex, portions thereof, and their structurally similar analogs, is stored in a machine-readable storage medium. Such data may be used for a variety of

purposes, such as drug discovery, analysis of interactions between cellular components during translation, modeling of vaccines, and the like.

[60]   Preferably, the invention is implemented in computer programs executing on programmable computers, comprising a processor, a data storage system (including volatile and non-volatile memory and/or storage elements), at least one input device, and at least one output device. Program code is applied to input data to perform the functions described above and generate output information. The output information is applied to one or more output devices, in known fashion. The computer may be, for example, a personal computer, microcomputer, or workstation of conventional design.

[61]   Each program is preferably implemented in a high level procedural or object oriented programming language to communicate with a computer system. However, the programs can be implemented in assembly or machine language, if desired. In any case, the language may be a compiled or interpreted language.

[62]   Each such computer program is preferably stored on a storage media or device (e.g., ROM or magnetic diskette) readable by a general or special purpose programmable computer, for configuring and operating the computer when the storage media or device is read by the computer to perform the procedures described herein. The system may also be considered to be implemented as a computer-readable storage medium, configured with a computer program, where the storage medium so configured causes a computer to operate in a specific and predefined manner to perform the functions described herein.

[63]   The HLA-binding peptide inhibitors are incorporated into a variety of formulations for therapeutic administration. In one aspect, the agents are formulated into pharmaceutical compositions by combination with appropriate, pharmaceutically acceptable carriers or diluents, and may be formulated into preparations in solid, semi-solid, liquid or gaseous forms, such as tablets, capsules, powders, granules, ointments, solutions, suppositories, injections, inhalants, gels, microspheres, and aerosols. As such, administration can be achieved in various ways, usually by oral administration. The HLA-binding peptide inhibitors may be systemic after administration or may be localized by virtue of the formulation, or by the use of an implant that acts to retain the active dose at the site of implantation.

[64]   In pharmaceutical dosage forms, the HLA-binding peptide inhibitors may be administered in the form of their pharmaceutically acceptable salts, or they may also be used alone or in appropriate association, as well as in combination with other pharmaceutically active compounds. The agents may be combined, as previously described, to provide a cocktail of activities. The following methods and excipients are merely exemplary and are in no way limiting.

[65]   For oral preparations, the agents can be used alone or in combination with appropriate additives to make tablets, powders, granules or capsules, for example, with conventional additives, such as lactose, mannitol, corn starch or potato starch; with binders, such as crystalline cellulose, cellulose derivatives, acacia, corn starch or gelatins; with disintegrators, such as corn starch, potato starch or sodium carboxymethylcellulose; with lubricants, such as talc or magnesium stearate; and if desired, with diluents, buffering agents, moistening agents, preservatives and flavoring agents.

[66]   In one embodiment of the invention, the oral formulations comprise enteric coatings, so that the active agent is delivered to the intestinal tract. Enteric formulations are often used to protect an active ingredient from the strongly acid contents of the stomach. Such formulations are created by coating a solid dosage form with a film of a polymer that is insoluble in acid environments, and soluble in basic environments. Exemplary films are cellulose acetate phthalate, polyvinyl acetate phthalate, hydroxypropyl methylcellulose phthalate and hydroxypropyl methylcellulose acetate succinate, methacrylate copolymers, and cellulose acetate phthalate.

[67]   Other enteric formulation comprise engineered polymer microspheres made of biologically erodable polymers, which display strong adhesive interactions with gastrointestinal mucus and cellular linings, can traverse both the mucosal absorptive epithelium and the follicle-associated epithelium covering the lymphoid tissue of Peyer's patches. The polymers maintain contact with intestinal epithelium for extended periods of time and actually penetrate it, through and between cells. See, for example, Mathiowitz *et al.* (1997) Nature 386 (6623): 410-414. Drug delivery systems can also utilize a core of superporous hydrogels (SPH) and SPH composite (SPHC), as described by Dorkoosh *et al.* (2001) J Control Release 71(3):307-18.

[68]   Formulations are typically provided in a unit dosage form, where the term "unit dosage form," refers to physically discrete units suitable as unitary dosages for human subjects, each unit containing a predetermined quantity of glutenase calculated in an amount sufficient to produce the desired effect in association with a pharmaceutically acceptable diluent, carrier or vehicle. The specifications for the unit dosage forms of the present invention depend on the particular complex employed and the effect to be achieved, and the pharmacodynamics associated with each complex in the host.

[69]   The pharmaceutically acceptable excipients, such as vehicles, adjuvants, carriers or diluents, are readily available to the public. Moreover, pharmaceutically acceptable auxiliary substances, such as pH adjusting and buffering agents, tonicity adjusting agents, stabilizers, wetting agents and the like, are readily available to the public.

METHODS OF TREATMENT

[70]   The subject methods are used to treat individuals suffering from Celiac Sprue and/or dermatitis herpetiformis, by administering an effective dose through a pharmaceutical formulation. Diagnosis of suitable patients may utilize a variety of criteria known to those of skill in the art. A quantitative increase in antibodies specific for gliadin, and/or tissue transglutaminase is indicative of the disease. Family histories and the presence of the HLA alleles HLA-DQ2 [DQ(a1*05, b1*02)] and/or DQ8 [DQ(a1*03, b1*0302)] are indicative of a susceptibility to the disease. Specific peptide analogs may be administered therapeutically to decrease inflammation, and/or to induce antigen-specific tolerance to treat autoimmunity. Methods for the delivery of peptides that are altered from a native peptide are known in the art. Alteration of native peptides with selective changes of crucial residues can induce unresponsiveness or change the responsiveness of antigen-specific autoreactive T cells.

[71]   The therapeutic effect may be measured in terms of clinical outcome, or may rely on immunological or biochemical tests. Suppression of the deleterious T-cell activity can be measured by enumeration of reactive Th1 cells, by quantitating the release of cytokines at the sites of lesions, or using other assays for the presence of autoimmune T cells known in the art. Alternatively, one may look for a reduction in symptoms of a disease.

[72]   Various methods for administration may be employed. The dosage of the therapeutic formulation will vary widely, depending upon the nature of the disease, the frequency of administration, the manner of administration, the clearance of the agent from the host, and the like. Such treatment could either be before meals or on a once-a-day basis or on a once-a-week basis, depending on the half-life of the inhibitor. A typical dose is at least about 1 μg, usually at least about 10 μg, more usually at least about 0.1 mg, and not more than about 10 mg, usually not more than about 1 mg. Enteric coating of these peptides may also enhance their lifetimes in the gut, thereby permitting delivery to the proximal and distal small intestinal tissue. Treatment of other autoimmune disorders such as Type I diabetes with such ligands may involve oral, intravenous or intramuscular administration. The initial dose may be larger, followed by smaller maintenance doses. The dose may be administered as infrequently as weekly or biweekly, or more often fractionated into smaller doses and administered daily, with meals, semi-weekly, etc. to maintain an effective dosage level.

[73]   The HLA-binding peptide inhibitors of the invention may be administered in the treatment of Type 1 diabetes (IDDM). IDDM and celiac disease are both immunologic disorders where specific HLA alleles are associated with disease risk. Transglutaminase autoantibodies can be found in some patients with IDDM. The prevalence of transglutaminase autoantibodies is higher in diabetic patients with HLA DQ2 or DQ8.

[74]   Human type I or insulin-dependent diabetes mellitus (IDDM) is characterized by autoimmune destruction of the β cells in the pancreatic islets of Langerhans. The depletion of β cells results in an inability to regulate levels of glucose in the blood. Overt diabetes occurs when the level of glucose in the blood rises above a specific level, usually about 250 mg/dl. In humans a long presymptomatic period precedes the onset of diabetes. During this period there is a gradual loss of pancreatic beta cell function. IDDM is currently treated by monitoring blood glucose levels to guide injection, or pump-based delivery, of recombinant insulin. Diet and exercise regimens contribute to achieving adequate blood glucose control. The inhibitors of the invention may be administered alone, or in combination with other therapies. The route of administration may be oral, as described for treatment of Celiac Sprue, or may be injected, *e.g.* i.v., i.m., *etc.* Administration may be performed during the pre-symptomatic phase, or in overt diabetes.

EXPERIMENTAL

Example

[75]   It has long been known that the principal toxic components of wheat gluten are a family of closely related Pro-Gln rich proteins called gliadins. Recent reports have suggested that peptides from a short segment of α-gliadin appear to account for most of the gluten-specific recognition by CD4+ T cells from Celiac Sprue patients. These peptides are substrates of tissue transglutaminase (tTGase), the primary auto-antigen in Celiac Sprue, and the products of this enzymatic reaction bind to the class II HLA DQ2 molecule. This "immunodominant" region of α-gliadin is part of an unusually long proteolytic product generated by the digestive process that: (a) is exceptionally resistant to further breakdown by gastric, pancreatic and intestinal brush border proteases; (b) is the highest specificity substrate of human tissue transglutaminase (tTGase) discovered to date; (c) contains at least six overlapping copies of epitopes known to be recognized by patient derived T cells; (d) stimulates representative T cell clones that recognize these epitopes with sub-micromolar efficacy; and (e) has homologs in proteins from all toxic foodgrains but no homologs in non-toxic foodgrain proteins.

[76]   *Identification of stable peptides from gastric protease, pancreatic protease and brush border membrane peptidase catalyzed digestion of recombinant α2-gliadin:* α2-gliadin, a representative α-gliadin (Arentz-Hansen et al. (2000) Gut **46**:46), was expressed in recombinant form and purified from E. coli. The α2-gliadin gene was cloned in pET28a plasmid (Novagen) and transformed into the expression host BL21(DE3) (Novagen). The transformed cells were grown in 1-liter cultures of LB media containing 50 μg/ml of

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kanamycin at 37 °C until the OD600 0.6-1 was achieved. The expression of α2-gliadin protein was induced with the addition of 0.4 mM isopropyl α-D-thiogalactoside (Sigma) and the cultures were further incubated at 37 °C for 20 hours. The cells expressing the recombinant α2-gliadin were centrifuged at 3600 rpm for 30 minutes. The pellet was resuspended in 15 ml of disruption buffer (200 mM sodium phosphate; 200 mM NaCl; 2.5 mM DTT; 1.5 mM benzamidine; 2.5 mM EDTA; 2 mg/L pepstatin; 2 mg/L leupeptin; 30% v/v glycerol) and lysed by sonication (1 minute; output control set to 6). After centrifugation at 45000g for 45 min, the supernatant was discarded and the pellet containing gliadin protein was resuspended in 50 ml of 7M urea in 50 mM Tris (pH = 8.0). The suspension was again centrifuged at 45000g for 45 min and the supernatant was harvested for purification. The supernatant containing α2-gliadin was incubated with 1 ml of nickel-nitrilotriacetic acid resin (Ni-NTA; Qiagen) overnight and then batch-loaded on a column with 2 ml of Ni-NTA. The column was washed with 7M urea in 50 mM Tris (pH = 8.0) and α2-gliadin was eluted with 200 mM imidazole, 7 M urea in 50 mM Tris (pH = 4.5). The fractions containing α2-gliadin were pooled into a final concentration of 70% ethanol solution and two volumes of 1.5M NaCl were added to precipitate the protein. The solution was incubated at 4 °C overnight and the final precipitate was collected by centrifugation at 45000 g for 30 min, rinsed in water, and re-centrifuged to remove the urea. The final purification step of the α-2 gliadin was developed with reverse-phase HPLC. The Ni-NTA purified protein fractions were pooled in 7 M urea buffer and injected to a Vydac (Hesperia, CA) polystyrene reverse-phase column (i.d. 4.6 mm x 25 cm) with the starting solvent (30% of solvent B: 1:1 HPLC-grade acetonitrile/isopropanol : 0.1% TFA). Solvent A was an aqueous solution with 0.1% TFA. The separation gradient extended from 30–100% of solvent B over 120 min at a flow rate of 0.8 ml/min.

Table 2, Amount of Peptides Digested after 15 hours

	33-mer	Control A	Control B
H1P0	<20%	>90%	>90%
H2P0	<20%	>61%	>85%
H3P0	<20%	>87%	>95%
H4P0	<20%	>96%	>95%
H5P0	<20%	>96%	>95%

[77]   The purity of the recombinant gliadin was >95%, which allowed for facile identification and assignment of proteolytic products by LC-MS/MS/UV. Although many previous studies utilized pepsin/trypsin treated gliadins, it was found that, among gastric and pancreatic proteases, chymotrypsin played a major role in the breakdown of α2-gliadin,

resulting in many small peptides from the C-terminal half of the protein and a few longer (>8 residues) peptides from the N-terminal half, the most noteworthy being a relatively large fragment, the 33-mer LQLQPFPQPQLPYPQPQLPYPQPQLPYPQPQPF (residues 57-89). This peptide was of particular interest for two reasons: (a) Whereas most other relatively stable proteolytic fragments were cleaved to smaller fragments when the reaction times were extended, the 33-mer peptide remained intact despite prolonged exposure to proteases; and (b) three distinct patient-specific T cell epitopes identified previously are present in this peptide, namely, PFPQPQLPY, PQPQLPYPQ (3 copies), and PYPQPQLPY (2 copies).

[78]   To establish the physiological relevance of this peptide, composite gastric/pancreatic enzymatic digestion of α2 gliadin was then examined. As expected, enzymatic digestion with pepsin (1:100 w/w ratio), trypsin (1:100), chymotrypsin (1:100), elastase (1:500) and carboxypeptidase (1:100) was quite efficient, leaving behind only a few peptides longer than 9 residues (the minimum size for a peptide to show class II MHC mediated antigenicity). In addition to the above-mentioned 33-mer, the peptide WQIPEQSR was also identified, and was used as a control in many of the following studies.

[79]   The small intestinal brush-border membrane (BBM) enzymes are known to be vital for breaking down any remaining peptides from gastric/pancreatic digestion into amino acids, dipeptides or tripeptides for nutritional uptake. Therefore a comprehensive analysis of gliadin metabolism also required investigations into BBM processing of gliadin peptides of reasonable length derived from gastric and pancreatic protease treatment. BBM fractions were prepared from rat small intestinal mucosa. The specific activities of known BBM peptidases were verified to be within the previously reported range. Whereas the half-life of disappearance of WQIPEQSR was ~60 min in the presence of 12 ng/μl BBM protein, the half-life of LQLQPFPQPQLPYPQPQLPYPQPQLPYPQPQPF digestion was >20 h. Therefore, the latter peptide remains intact throughout the digestive process in the stomach and upper small intestine, and is poised to act as a potential antigen for T cell proliferation and intestinal toxicity in genetically susceptible individuals.

Example 2

The 33-mer gliadin peptide is an excellent substrate for tTGase, and the resulting product is a highly potent activator of patient-derived T cells: A number of recent studies have demonstrated that regiospecific deamidation of immunogenic gliadin peptides by tTGase increases their affinity for HLA-DQ2 as well as the potency with which they activate patient-derived gluten-specific T cells. It has been shown the specificity of tTGase for certain short antigenic peptides derived from gliadin is higher than its specificity toward its physiological target site in fibronectin, for example, the specificity of tTGase for the α-gliadin

derived peptide PQPQLPYPQPQLPY is 5-fold higher than that for its target peptide sequence in fibrinogen, its natural substrate. The kinetics and regiospecificity of deamidation of the 33-mer α-gliadin peptide identified as above were therefore measured. The k_{cat}/K_M was higher than that reported for any peptide studied thus far: kcat / KM = 440 min-1mM-1 for LQLQPFPQPQLPYPQPQLPYPQPQLPYPQPQPF compared to kcat / KM = 82 min-1mM-1 for PQPQLPY and kcat / KM = 350 min-1mM-1 for PQPQLPYPQPQLPY.

[80]   Moreover,   LC-MS-MS   analysis   revealed   that LQLQPFPQP<u>Q</u>LPYPQPQLPYPQP<u>Q</u>LPYPQPQPF was selectively deamidated by tTGase at the underlined residues. Since tTGase activity is associated with the brush border membrane of intestinal enterocytes, it is likely that dietary uptake of even small quantities of wheat gluten will lead to the build-up of sufficient quantities of this 33-mer gliadin peptide in the intestinal lumen so as to be recognized and processed by tTGase.

[81]   *Structural characteristics of the 33-mer gliadin peptide and its naturally occurring homologs:* Sequence alignment searches using BLASTP in all non-redundant protein databases revealed several homologs (E-value < 0.001) of the 33-mer gliadin peptide. Interestingly, foodgrain derived homologs were only found in gliadins (from wheat), hordeins (from barley) and secalins (from rye), all of which have been proven to be toxic to Celiac patients (Figure 7). Nontoxic foodgrain proteins, such as avenins (in oats), rice and maize, do not contain homologous sequences to the 33-mer gliadin. In contrast, a BLASTP search with the entire α2-gliadin sequence identified foodgrain protein homologs from both toxic and nontoxic proteins. Based on available information regarding the substrate specificities of gastric, pancreatic and BBM proteases and peptidases, it is predicted that, although most gluten homologs to the 33-mer gliadin peptide contained multiple proteolytic sites and are therefore unlikely to be completely stable toward digestion, several sequences from wheat, rye and barley are expected to be comparably resistant to gastric and intestinal proteolysis. The stable peptide homologs to the 33-mer α2-gliadin peptide are QPQPFPPQLPYPQTQPFPPQQPYPQPQPQYPQPQ (from α1- and α6-gliadins); QQQPFPQQPIPQQPQPYPQQPQPYPQQPFPPQQPF (from B1 hordein); QPFPQPQQTFPQQPQLPFPQQPQQPFPQPQ (from γ-gliadin); VQWPQQQPVPQPHQPF (from γ-gliadin), VQGQGIIQPQQPAQ (from γ-gliadin), FLQPQQPFPQQPQQPYPQQPQQPFPQ (from γ-gliadin), FSQPQQQFPQPQQPQQSFPQQQPP (from γ-gliadin), QPFPQPQQPTPIQPQQPFPQRPQQPFPQPQ (from ω-secalin). These stable peptides are all located at the N-terminal region of the corresponding proteins. The presence of proline residues after otherwise cleavable residues in these peptides would contribute to their proteolytic stability.

[82]   The unique primary sequence of the 33-mer gliadin peptide also had homologs among a few non-gluten proteins. Among the strongest homologs were internal sequences from pertactin (a highly immunogenic protein from *Bordetella pertussis*) and a mammalian inositol-polyphosphate 5-phosphatase of unknown function.   In both cases available information suggested that the homology could have biologically relevance. For example, the region of pertactin that is homologous to the 33-mer gliadin peptide is known to be part of the immunodominant segment of the protein.   In the case of the homologous phosphatase, the corresponding peptide region of the phosphatase is known to be responsible for vesicular trafficking of the phosphatase to the cytoplasmic Golgi. In analogy with the current picture of how gliadin peptides are presented to HLA-DQ2 via a tTGase mediated pathway, these Pro-Gln-rich segments of both pertactin and the phosphatase are likely to be good tTGase substrates.

Example 3

[83]   *X-ray Crystallographic Analysis of soluble HLA-DQ2.* The soluble extracellular domains of the α- and β-chains of HLA-DQ2 were co-expressed in insect cells using a baculovirus expression system (pAcAB3 vector, BD Biosciences). The DNA sequence of the engineered α- and β-chains is provided in SEQ ID NO:1 and SEQ ID NO:2. The β-chain is fused to a sequence encoding the epitope QLQPFPQPELPY at its N-terminal end, and to a biotin recognition sequence at its C-terminal end.   Both subunits are also fused to complementary leucine zipper sequences at their C-terminal ends.   Since a Factor Xa proteolysis site is engineered between the leucine zipper sequences and the DQ2 subunits, prior to crystallization the leucine zippers were removed from DQ2 by Factor Xa digestion.

[84]   Initial purification of the DQ2 heterodimer from the culture medium was performed on an immunoaffinity column containing an anti-DQ2 monoclonal antibody (2.12.E11) bound to a Protein A Sepharose CL-4B column. Subsequently DQ2 was treated with Factor Xa, and purified from the digestion mixture by anion-exchange chromatography followed by size-exclusion chromatography, and concentrated to 4 mg/ml in 25 mM Tris-HCl, pH 8.0. Crystals of the DQ2-epitope complex were obtained using the hanging drop method. Typically, 2 μL of protein solution (2~4 mg/ml DQ2, 25 mM Tris-HCl, pH 8.0) and 2 μL of precipitant buffer (200 mM ammonium acetate, 40 mM ammonium sulfate, 4% ethylene glycol, 22~26% PEG 3350) were combined in a single drop hanging over 1 mL of precipitant buffer at room temperature. Small crystals appeared within three days and grew to full size in two weeks.

[85]   For data collection, crystals were transferred to a cryoprotectant solution (mother liquor containing 28% ethylene glycol) for 2 hours, and then flash cooled at 100K in liquid nitrogen. X-ray diffraction data were collected from a single crystal to 2.22 Å resolution at

beamline 11-1 of the Stanford Synchrotron Radiation Laboratory using a Quantum 315 CCD detector. Oscillation images were processed with DENZO and data reduction was carried out with SCALEPACK.

[86]   The structure of DQ2-epitope complex was determined by molecular replacement using the program AMoRe in the CCP4 suite of programs. The 2.4 Å resolution structure of insulin peptide-HLA-DQ8 complex (RCSB accession code: 1JK8) minus the insulin peptide and solvent molecules was used as the search model. After initial refinement with the maximum likelihood function of program REFMAC, iterative cycles of refinement including simulated annealing, temperature factor refinement, and energy minimization were made with the program CNS. Model building and correction were performed using σ_A-weighted F_o-F_c and $2F_o$-F_c electron density maps with the program O. The current model has R-factor of 0.2209 with a R_{free} of 0.2793 at 2.22 Å resolution. Analysis of the Ramachandran plot generated using the program PROCHECK shows that 91.2 % of residues are in most favored regions, 7.9 % are in additional allowed regions, 0.5 % are in generously allowed regions, and 0.5 % are in disallowed regions.

[87]   There are two molecules of DQ2-epitope in the asymmetric unit. In the first complex, α-chain of DQ2, β-chain of DQ2, and the alpha-I epitope peptide (sequence QLQPFPQPELPY) are designated A, B, and C respectively. In the second complex, α-chain, β-chain, and epitope peptide are designated D, E, and F respectively. The model includes 354 water molecules (name: HOH) and 4 ethylene glycol molecules (name: EDO).

[88]   Thr-106—His-112 region in chain B and Arg-105—His-112 region in chain E are disordered and thus absent from the model. Superposition of the DQ8 structure suggests that these regions form an extended loop. Side chain conformation of the following residues are undefined due to weak electron density in the corresponding region and therefore only their backbone atoms are included in the model: Asp-135 (in chain B), Leu-2, Gln-3, Tyr-12 (in chain C), Asp-135, Gln-136 (in chain E), and Leu-2, Gln-3 (in chain F).

[89]   *Structure-based design of DQ2 binding peptide inhibitors.* The crystal structure of the DQ2-epitope complex reveals precisely which atoms in the peptide QLQPFPQPELPYP point outward (by inference into the T cell receptor binding pocket). Substitutions at these atoms can yield altered peptide ligands that retain the ability to bind tightly to DQ2 but are no longer able to allow docking of the DQ2-peptide complex into disease specific T cell receptors.

[90]   The coordinate of the structure are as follows:

Coordinates

```
REMARK peptide link removed (applied DPEP): from B     105  to B     113
REMARK peptide link removed (applied DPEP): from E     104  to E     113
REMARK disulphide added: from A     107  to A     163
REMARK disulphide added: from B     15   to B     79
REMARK disulphide added: from B     117  to B     173
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REMARK disulphide added: from D   107  to D     163
REMARK disulphide added: from E    15  to E      79
REMARK disulphide added: from E   117  to E     173
REMARK DATE:25-Apr-03  13:00:06      created by user: kim
REMARK VERSION:1.0
ATOM      1  CB  VAL A   2      31.060   3.851   4.095  1.00 39.43      A
ATOM      2  CG1 VAL A   2      30.078   2.835   3.531  1.00 40.06      A
ATOM      3  CG2 VAL A   2      30.370   5.185   4.344  1.00 39.97      A
ATOM      4  C   VAL A   2      30.653   3.406   6.542  1.00 36.80      A
ATOM      5  O   VAL A   2      29.644   2.702   6.527  1.00 38.25      A
ATOM      6  N   VAL A   2      32.189   1.926   5.235  1.00 36.80      A
ATOM      7  CA  VAL A   2      31.684   3.321   5.414  1.00 37.95      A
ATOM      8  N   ALA A   3      30.910   4.267   7.523  1.00 34.99      A
ATOM      9  CA  ALA A   3      30.003   4.416   8.658  1.00 32.94      A
ATOM     10  CB  ALA A   3      30.325   3.368   9.721  1.00 33.34      A
ATOM     11  C   ALA A   3      30.094   5.805   9.263  1.00 30.81      A
ATOM     12  O   ALA A   3      30.980   6.583   8.914  1.00 29.57      A
ATOM     13  N   ASP A   4      29.172   6.115  10.170  1.00 28.70      A
ATOM     14  CA  ASP A   4      29.173   7.416  10.822  1.00 26.95      A
ATOM     15  CB  ASP A   4      27.812   7.722  11.456  1.00 28.65      A
ATOM     16  CG  ASP A   4      26.687   7.845  10.431  1.00 31.67      A
ATOM     17  OD1 ASP A   4      26.904   8.417   9.339  1.00 33.31      A
ATOM     18  OD2 ASP A   4      25.568   7.381  10.735  1.00 33.31      A
ATOM     19  C   ASP A   4      30.254   7.432  11.898  1.00 26.51      A
ATOM     20  O   ASP A   4      30.857   8.469  12.170  1.00 25.25      A
ATOM     21  N   HIS A   5      30.493   6.277  12.515  1.00 26.22      A
ATOM     22  CA  HIS A   5      31.527   6.164  13.544  1.00 26.52      A
ATOM     23  CB  HIS A   5      30.939   6.339  14.950  1.00 25.34      A
ATOM     24  CG  HIS A   5      30.240   7.647  15.156  1.00 28.69      A
ATOM     25  CD2 HIS A   5      30.716   8.870  15.492  1.00 29.15      A
ATOM     26  ND1 HIS A   5      28.881   7.801  14.979  1.00 28.23      A
ATOM     27  CE1 HIS A   5      28.550   9.062  15.198  1.00 29.92      A
ATOM     28  NE2 HIS A   5      29.645   9.732  15.511  1.00 29.84      A
ATOM     29  C   HIS A   5      32.246   4.826  13.465  1.00 25.79      A
ATOM     30  O   HIS A   5      31.630   3.785  13.227  1.00 25.68      A
ATOM     31  N   VAL A   6      33.559   4.866  13.659  1.00 24.52      A
ATOM     32  CA  VAL A   6      34.385   3.667  13.628  1.00 23.27      A
ATOM     33  CB  VAL A   6      35.311   3.657  12.407  1.00 25.22      A
ATOM     34  CG1 VAL A   6      36.187   2.414  12.440  1.00 24.31      A
ATOM     35  CG2 VAL A   6      34.489   3.708  11.127  1.00 27.15      A
ATOM     36  C   VAL A   6      35.256   3.633  14.876  1.00 22.15      A
ATOM     37  O   VAL A   6      35.937   4.606  15.185  1.00 21.49      A
ATOM     38  N   ALA A   7      35.239   2.513  15.586  1.00 19.90      A
ATOM     39  CA  ALA A   7      36.038   2.382  16.799  1.00 19.70      A
ATOM     40  CB  ALA A   7      35.132   2.394  18.034  1.00 14.59      A
ATOM     41  C   ALA A   7      36.867   1.111  16.791  1.00 18.62      A
ATOM     42  O   ALA A   7      36.548   0.153  16.088  1.00 20.78      A
ATOM     43  N   SER A   8      37.947   1.120  17.560  1.00 16.95      A
ATOM     44  CA  SER A   8      38.807  -0.048  17.700  1.00 18.62      A
ATOM     45  CB  SER A   8      40.211   0.215  17.153  1.00 17.69      A
ATOM     46  OG  SER A   8      40.209   0.271  15,738  1.00 19.81      A
ATOM     47  C   SER A   8      38.868  -0.310  19.199  1.00 18.76      A
ATOM     48  O   SER A   8      39.570   0.376  19.943  1.00 19.35      A
ATOM     49  N   TYR A   9      38.070  -1.268  19.645  1.00 19.38      A
ATOM     50  CA  TYR A   9      38.038  -1.608  21.048  1.00 19.44      A
ATOM     51  CB  TYR A   9      36.628  -1.980  21.471  1.00 19.18      A
ATOM     52  CG  TYR A   9      35.714  -0.785  21.375  1.00 18.65      A
ATOM     53  CD1 TYR A   9      36.073   0.435  21.962  1.00 16.57      A
ATOM     54  CE1 TYR A   9      35.237   1.537  21.897  1.00 17.39      A
ATOM     55  CD2 TYR A   9      34.493  -0.865  20.716  1.00 17.15      A
ATOM     56  CE2 TYR A   9      33.641   0.235  20.647  1.00 16.82      A
ATOM     57  CZ  TYR A   9      34.020   1.431  21.243  1.00 18.07      A
ATOM     58  OH  TYR A   9      33.169   2.509  21.210  1.00 19.77      A
ATOM     59  C   TYR A   9      38.993  -2.751  21.106  1.00 20.21      A
ATOM     60  O   TYR A   9      38.652  -3.911  21.344  1.00 15.05      A
ATOM     61  N   GLY A  10      40.225  -2.357  20.831  1.00 21.69      A
ATOM     62  CA  GLY A  10      41.311  -3.275  20.808  1.00 22.54      A
ATOM     63  C   GLY A  10      42.276  -3.080  19.655  1.00 21.74      A
ATOM     64  O   GLY A  10      42.248  -3.863  18.713  1.00 22.02      A
ATOM     65  N   VAL A  11      43.083  -2.023  19.674  1.00 18.91      A
ATOM     66  CA  VAL A  11      44.119  -1.949  18.651  1.00 17.39      A
ATOM     67  CB  VAL A  11      44.554  -0.506  18.277  1.00 18.75      A
ATOM     68  CG1 VAL A  11      45.845  -0.558  17.455  1.00 16.18      A
ATOM     69  CG2 VAL A  11      43.481   0.165  17.432  1.00 15.25      A
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ATOM	70	C	VAL A	11	45.228	-2.644	19.447	1.00	17.05	A
ATOM	71	O	VAL A	11	45.679	-2.145	20.481	1.00	19.34	A
ATOM	72	N	ASN A	12	45.616	-3.828	19.005	1.00	17.39	A
ATOM	73	CA	ASN A	12	46.643	-4.597	19.693	1.00	17.18	A
ATOM	74	CB	ASN A	12	46.113	-5.994	20.052	1.00	15.04	A
ATOM	75	CG	ASN A	12	44.834	-5.947	20.882	1.00	15.96	A
ATOM	76	OD1	ASN A	12	43.780	-5.490	20.417	1.00	18.20	A
ATOM	77	ND2	ASN A	12	44.921	-6.420	22.114	1.00	10.46	A
ATOM	78	C	ASN A	12	47.863	-4.739	18.797	1.00	18.90	A
ATOM	79	O	ASN A	12	47.752	-5.162	17.641	1.00	18.80	A
ATOM	80	N	LEU A	13	49.026	-4.403	19.343	1.00	18.60	A
ATOM	81	CA	LEU A	13	50.264	-4.478	18.599	1.00	19.90	A
ATOM	82	CB	LEU A	13	50.695	-3.064	18.217	1.00	23.26	A
ATOM	83	CG	LEU A	13	52.077	-2.881	17.594	1.00	24.86	A
ATOM	84	CD1	LEU A	13	52.085	-3.494	16.201	1.00	26.92	A
ATOM	85	CD2	LEU A	13	52.417	-1.402	17.534	1.00	24.75	A
ATOM	86	C	LEU A	13	51.391	-5.165	19.370	1.00	20.37	A
ATOM	87	O	LEU A	13	51.559	-4.953	20.566	1.00	21.11	A
ATOM	88	N	TYR A	14	52.145	-6.004	18.673	1.00	21.04	A
ATOM	89	CA	TYR A	14	53.291	-6.691	19.255	1.00	24.07	A
ATOM	90	CB	TYR A	14	52.909	-8.050	19.844	1.00	27.05	A
ATOM	91	CG	TYR A	14	54.091	-8.729	20.489	1.00	29.27	A
ATOM	92	CD1	TYR A	14	54.569	-8.304	21.723	1.00	30.07	A
ATOM	93	CE1	TYR A	14	55.709	-8.867	22.285	1.00	31.38	A
ATOM	94	CD2	TYR A	14	54.783	-9.744	19.830	1.00	31.63	A
ATOM	95	CE2	TYR A	14	55.923	-10.314	20.383	1.00	30.29	A
ATOM	96	CZ	TYR A	14	56.381	-9.868	21.609	1.00	31.37	A
ATOM	97	OH	TYR A	14	57.515	-10.413	22.160	1.00	34.48	A
ATOM	98	C	TYR A	14	54.291	-6.900	18.128	1.00	25.30	A
ATOM	99	O	TYR A	14	53.907	-7.206	16.994	1.00	25.51	A
ATOM	100	N	GLN A	15	55.571	-6.725	18.429	1.00	24.61	A
ATOM	101	CA	GLN A	15	56.603	-6.891	17.414	1.00	25.19	A
ATOM	102	CB	GLN A	15	56.932	-5.549	16.754	1.00	23.54	A
ATOM	103	CG	GLN A	15	57.278	-4.443	17.738	1.00	23.98	A
ATOM	104	CD	GLN A	15	57.567	-3.116	17.056	1.00	26.32	A
ATOM	105	OE1	GLN A	15	57.575	-2.062	17.702	1.00	28.26	A
ATOM	106	NE2	GLN A	15	57.810	-3.159	15.749	1.00	24.64	A
ATOM	107	C	GLN A	15	57.848	-7.487	18.036	1.00	26.16	A
ATOM	108	O	GLN A	15	58.134	-7.263	19.211	1.00	24.31	A
ATOM	109	N	SER A	16	58.583	-8.252	17.236	1.00	28.72	A
ATOM	110	CA	SER A	16	59.801	-8.912	17.698	1.00	30.37	A
ATOM	111	CB	SER A	16	60.341	-9.830	16.603	1.00	28.35	A
ATOM	112	OG	SER A	16	60.569	-9.100	15.407	1.00	31.43	A
ATOM	113	C	SER A	16	60.883	-7.918	18.111	1.00	32.37	A
ATOM	114	O	SER A	16	61.538	-8.104	19.134	1.00	33.91	A
ATOM	115	N	TYR A	17	61.073	-6.863	17.325	1.00	32.49	A
ATOM	116	CA	TYR A	17	62.096	-5.890	17.664	1.00	34.27	A
ATOM	117	CB	TYR A	17	62.172	-4.788	16.620	1.00	35.41	A
ATOM	118	CG	TYR A	17	63.371	-3.911	16.837	1.00	37.77	A
ATOM	119	CD1	TYR A	17	64.646	-4.347	16.470	1.00	39.38	A
ATOM	120	CE1	TYR A	17	65.769	-3.569	16.715	1.00	40.15	A
ATOM	121	CD2	TYR A	17	63.247	-2.671	17.456	1.00	36.31	A
ATOM	122	CE2	TYR A	17	64.360	-1.886	17.707	1.00	39.40	A
ATOM	123	CZ	TYR A	17	65.621	-2.338	17.335	1.00	41.42	A
ATOM	124	OH	TYR A	17	66.732	-1.562	17.580	1.00	43.02	A
ATOM	125	C	TYR A	17	61.821	-5.270	19.027	1.00	34.43	A
ATOM	126	O	TYR A	17	60.765	-4.682	19.248	1.00	35.58	A
ATOM	127	N	GLY A	18	62.783	-5.390	19.935	1.00	34.98	A
ATOM	128	CA	GLY A	18	62.609	-4.854	21.270	1.00	35.78	A
ATOM	129	C	GLY A	18	62.730	-5.968	22.292	1.00	36.87	A
ATOM	130	O	GLY A	18	63.761	-6.082	22.952	1.00	38.48	A
ATOM	131	N	PRO A	19	61.692	-6.807	22.459	1.00	37.06	A
ATOM	132	CD	PRO A	19	61.745	-7.967	23.368	1.00	35.58	A
ATOM	133	CA	PRO A	19	60.409	-6.769	21.747	1.00	34.79	A
ATOM	134	CB	PRO A	19	59.853	-8.166	21.981	1.00	35.91	A
ATOM	135	CG	PRO A	19	60.300	-8.437	23.394	1.00	36.88	A
ATOM	136	C	PRO A	19	59.531	-5.706	22.379	1.00	33.10	A
ATOM	137	O	PRO A	19	59.844	-5.209	23.456	1.00	33.71	A
ATOM	138	N	SER A	20	58.435	-5.349	21.722	1.00	31.83	A
ATOM	139	CA	SER A	20	57.548	-4.341	22.290	1.00	30.25	A
ATOM	140	CB	SER A	20	58.060	-2.932	21.965	1.00	29.00	A
ATOM	141	OG	SER A	20	58.072	-2.689	20.567	1.00	32.27	A
ATOM	142	C	SER A	20	56.108	-4.497	21.820	1.00	27.93	A
ATOM	143	O	SER A	20	55.829	-5.129	20.805	1.00	28.23	A

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ATOM	144	N	GLY A	21	55.191	-3.911	22.576	1.00	25.87	A
ATOM	145	CA	GLY A	21	53.797	-4.001	22.222	1.00	23.78	A
ATOM	146	C	GLY A	21	53.076	-2.732	22.598	1.00	23.94	A
ATOM	147	O	GLY A	21	53.638	-1.840	23.247	1.00	24.81	A
ATOM	148	N	GLN A	22	51.821	-2.641	22.187	1.00	20.60	A
ATOM	149	CA	GLN A	22	51.033	-1.470	22.495	1.00	19.67	A
ATOM	150	CB	GLN A	22	51.239	-0.400	21.415	1.00	19.28	A
ATOM	151	CG	GLN A	22	50.584	0.943	21.736	1.00	18.12	A
ATOM	152	CD	GLN A	22	50.732	1.971	20.613	1.00	18.84	A
ATOM	153	OE1	GLN A	22	51.694	2.749	20.576	1.00	19.77	A
ATOM	154	NE2	GLN A	22	49.777	1.968	19.688	1.00	16.83	A
ATOM	155	C	GLN A	22	49.573	-1.873	22.566	1.00	18.66	A
ATOM	156	O	GLN A	22	49.128	-2.747	21.826	1.00	18.45	A
ATOM	157	N	TYR A	23	48.842	-1.257	23.484	1.00	17.25	A
ATOM	158	CA	TYR A	23	47.423	-1.529	23.615	1.00	16.53	A
ATOM	159	CB	TYR A	23	47.127	-2.497	24.752	1.00	14.51	A
ATOM	160	CG	TYR A	23	45.674	-2.904	24.760	1.00	12.67	A
ATOM	161	CD1	TYR A	23	45.251	-4.070	24.121	1.00	13.38	A
ATOM	162	CE1	TYR A	23	43.904	-4.415	24.070	1.00	13.23	A
ATOM	163	CD2	TYR A	23	44.713	-2.093	25.346	1.00	11.07	A
ATOM	164	CE2	TYR A	23	43.365	-2.425	25.299	1.00	12.99	A
ATOM	165	CZ	TYR A	23	42.964	-3.583	24.664	1.00	13.72	A
ATOM	166	OH	TYR A	23	41.624	-3.907	24.611	1.00	17.15	A
ATOM	167	C	TYR A	23	46.694	-0.220	23.860	1.00	16.88	A
ATOM	168	O	TYR A	23	46.975	0.491	24.824	1.00	16.57	A
ATOM	169	N	THR A	24	45.757	0.085	22.969	1.00	16.16	A
ATOM	170	CA	THR A	24	44.975	1.311	23.038	1.00	16.43	A
ATOM	171	CB	THR A	24	45.594	2.405	22.136	1.00	18.41	A
ATOM	172	OG1	THR A	24	45.581	1.954	20.771	1.00	17.20	A
ATOM	173	CG2	THR A	24	47.029	2.692	22.537	1.00	18.64	A
ATOM	174	C	THR A	24	43.570	1.058	22.499	1.00	15.15	A
ATOM	175	O	THR A	24	43.314	0.037	21.879	1.00	15.70	A
ATOM	176	N	HIS A	25	42.667	1.993	22.754	1.00	15.66	A
ATOM	177	CA	HIS A	25	41.320	1.924	22.210	1.00	15.79	A
ATOM	178	CB	HIS A	25	40.243	1.834	23.297	1.00	13.55	A
ATOM	179	CG	HIS A	25	39.956	0.430	23.734	1.00	15.91	A
ATOM	180	CD2	HIS A	25	40.688	-0.704	23.624	1.00	13.86	A
ATOM	181	ND1	HIS A	25	38.790	0.071	24.374	1.00	15.91	A
ATOM	182	CE1	HIS A	25	38.815	-1.222	24.639	1.00	14.38	A
ATOM	183	NE2	HIS A	25	39.956	-1.715	24.193	1.00	16.99	A
ATOM	184	C	HIS A	25	41.176	3.212	21.437	1.00	14.18	A
ATOM	185	O	HIS A	25	41.677	4.241	21.865	1.00	13.52	A
ATOM	186	N	GLU A	26	40.510	3.150	20.292	1.00	14.81	A
ATOM	187	CA	GLU A	26	40.333	4.329	19.462	1.00	16.96	A
ATOM	188	CB	GLU A	26	41.132	4.188	18.164	1.00	16.34	A
ATOM	189	CG	GLU A	26	42.644	4.158	18.311	1.00	18.80	A
ATOM	190	CD	GLU A	26	43.345	4.036	16.958	1.00	22.68	A
ATOM	191	OE1	GLU A	26	42.744	4.456	15.946	1.00	26.77	A
ATOM	192	OE2	GLU A	26	44.490	3.539	16.901	1.00	20.46	A
ATOM	193	C	GLU A	26	38.875	4.543	19.101	1.00	17.22	A
ATOM	194	O	GLU A	26	38.104	3.597	18.996	1.00	18.66	A
ATOM	195	N	PHE A	27	38.503	5.802	18.917	1.00	18.91	A
ATOM	196	CA	PHE A	27	37.150	6.135	18.509	1.00	19.32	A
ATOM	197	CB	PHE A	27	36.290	6.546	19.698	1.00	20.19	A
ATOM	198	CG	PHE A	27	34.834	6.653	19.357	1.00	23.33	A
ATOM	199	CD1	PHE A	27	34.024	5.524	19.360	1.00	22.07	A
ATOM	200	CD2	PHE A	27	34.289	7.868	18.971	1.00	23.24	A
ATOM	201	CE1	PHE A	27	32.692	5.606	18.980	1.00	26.16	A
ATOM	202	CE2	PHE A	27	32.954	7.962	18.587	1.00	25.99	A
ATOM	203	CZ	PHE A	27	32.155	6.828	18.592	1.00	25.46	A
ATOM	204	C	PHE A	27	37.260	7.291	17.522	1.00	19.10	A
ATOM	205	O	PHE A	27	37.733	8.375	17.871	1.00	19.83	A
ATOM	206	N	ASP A	28	36.831	7.052	16.288	1.00	19.17	A
ATOM	207	CA	ASP A	28	36.901	8.060	15.227	1.00	18.94	A
ATOM	208	CB	ASP A	28	35.910	9.203	15.473	1.00	21.33	A
ATOM	209	CG	ASP A	28	34.472	8.787	15.223	1.00	24.96	A
ATOM	210	OD1	ASP A	28	34.266	7.801	14.484	1.00	25.18	A
ATOM	211	OD2	ASP A	28	33.552	9.448	15.749	1.00	27.42	A
ATOM	212	C	ASP A	28	38.297	8.640	15.043	1.00	17.57	A
ATOM	213	O	ASP A	28	38.467	9.853	14.955	1.00	17.04	A
ATOM	214	N	GLY A	29	39.292	7.760	15.002	1.00	17.53	A
ATOM	215	CA	GLY A	29	40.658	8.189	14.779	1.00	17.51	A
ATOM	216	C	GLY A	29	41.437	8.738	15.953	1.00	16.95	A
ATOM	217	O	GLY A	29	42.621	9.010	15.814	1.00	19.26	A

ATOM	218	N	ASP	A	30	40.797	8.922	17.098	1.00	16.92	A
ATOM	219	CA	ASP	A	30	41.511	9.438	18.254	1.00	16.83	A
ATOM	220	CB	ASP	A	30	40.816	10.678	18.796	1.00	18.99	A
ATOM	221	CG	ASP	A	30	40.988	11.864	17.888	1.00	21.09	A
ATOM	222	OD1	ASP	A	30	42.145	12.177	17.538	1.00	22.94	A
ATOM	223	OD2	ASP	A	30	39.971	12.478	17.525	1.00	21.68	A
ATOM	224	C	ASP	A	30	41.656	8.392	19.345	1.00	17.25	A
ATOM	225	O	ASP	A	30	40.777	7.553	19.543	1.00	15.40	A
ATOM	226	N	GLU	A	31	42.784	8.453	20.041	1.00	16.77	A
ATOM	227	CA	GLU	A	31	43.111	7.514	21.107	1.00	18.43	A
ATOM	228	CB	GLU	A	31	44.620	7.607	21.392	1.00	20.90	A
ATOM	229	CG	GLU	A	31	45.147	6.853	22.608	1.00	24.68	A
ATOM	230	CD	GLU	A	31	46.678	6.924	22.702	1.00	27.25	A
ATOM	231	OE1	GLU	A	31	47.258	7.931	22.239	1.00	26.93	A
ATOM	232	OE2	GLU	A	31	47.302	5.985	23.242	1.00	27.21	A
ATOM	233	C	GLU	A	31	42.296	7.777	22.375	1.00	17.51	A
ATOM	234	O	GLU	A	31	42.361	8.863	22.952	1.00	17.13	A
ATOM	235	N	GLN	A	32	41.525	6.784	22.807	1.00	15.52	A
ATOM	236	CA	GLN	A	32	40.726	6.942	24.020	1.00	16.47	A
ATOM	237	CB	GLN	A	32	39.542	5.980	24.009	1.00	15.91	A
ATOM	238	CG	GLN	A	32	38.439	6.399	23.065	1.00	15.97	A
ATOM	239	CD	GLN	A	32	37.292	5.419	23.071	1.00	20.20	A
ATOM	240	OE1	GLN	A	32	37.478	4.228	22.808	1.00	18.09	A
ATOM	241	NE2	GLN	A	32	36.091	5.912	23.374	1.00	20.57	A
ATOM	242	C	GLN	A	32	41.584	6.701	25.255	1.00	16.61	A
ATOM	243	O	GLN	A	32	41.448	7.387	26.272	1.00	15.51	A
ATOM	244	N	PHE	A	33	42.470	5.720	25.151	1.00	15.59	A
ATOM	245	CA	PHE	A	33	43.370	5.389	26.239	1.00	16.34	A
ATOM	246	CB	PHE	A	33	42.583	4.854	27.443	1.00	17.21	A
ATOM	247	CG	PHE	A	33	41.951	3.502	27.222	1.00	16.68	A
ATOM	248	CD1	PHE	A	33	42.686	2.333	27.406	1.00	15.57	A
ATOM	249	CD2	PHE	A	33	40.598	3.397	26.903	1.00	18.54	A
ATOM	250	CE1	PHE	A	33	42.083	1.076	27.288	1.00	16.34	A
ATOM	251	CE2	PHE	A	33	39.983	2.147	26.782	1.00	17.35	A
ATOM	252	CZ	PHE	A	33	40.729	0.983	26.978	1.00	16.56	A
ATOM	253	C	PHE	A	33	44.363	4.343	25.776	1.00	16.66	A
ATOM	254	O	PHE	A	33	44.209	3.746	24.712	1.00	16.85	A
ATOM	255	N	TYR	A	34	45.398	4.139	26.572	1.00	16.03	A
ATOM	256	CA	TYR	A	34	46.377	3.125	26.264	1.00	16.93	A
ATOM	257	CB	TYR	A	34	47.636	3.730	25.621	1.00	16.33	A
ATOM	258	CG	TYR	A	34	48.528	4.541	26.523	1.00	17.31	A
ATOM	259	CD1	TYR	A	34	49.519	3.930	27.291	1.00	17.48	A
ATOM	260	CE1	TYR	A	34	50.367	4.683	28.097	1.00	19.16	A
ATOM	261	CD2	TYR	A	34	48.404	5.928	26.586	1.00	17.68	A
ATOM	262	CE2	TYR	A	34	49.244	6.690	27.388	1.00	19.73	A
ATOM	263	CZ	TYR	A	34	50.224	6.060	28.141	1.00	20.10	A
ATOM	264	OH	TYR	A	34	51.044	6.815	28.941	1.00	23.02	A
ATOM	265	C	TYR	A	34	46.692	2.473	27.588	1.00	17.88	A
ATOM	266	O	TYR	A	34	46.429	3.042	28.646	1.00	21.13	A
ATOM	267	N	VAL	A	35	47.213	1.261	27.535	1.00	17.31	A
ATOM	268	CA	VAL	A	35	47.571	0.570	28.749	1.00	18.89	A
ATOM	269	CB	VAL	A	35	46.950	-0.848	28.804	1.00	19.12	A
ATOM	270	CG1	VAL	A	35	47.589	-1.660	29.912	1.00	17.56	A
ATOM	271	CG2	VAL	A	35	45.454	-0.742	29.048	1.00	19.75	A
ATOM	272	C	VAL	A	35	49.084	0.478	28.786	1.00	18.84	A
ATOM	273	O	VAL	A	35	49.701	-0.050	27.877	1.00	16.51	A
ATOM	274	N	ASP	A	36	49.676	1.039	29.830	1.00	22.55	A
ATOM	275	CA	ASP	A	36	51.121	0.984	29.996	1.00	25.86	A
ATOM	276	CB	ASP	A	36	51.542	1.872	31.172	1.00	26.89	A
ATOM	277	CG	ASP	A	36	53.033	2.108	31.221	1.00	26.55	A
ATOM	278	OD1	ASP	A	36	53.796	1.125	31.270	1.00	29.78	A
ATOM	279	OD2	ASP	A	36	53.441	3.285	31.213	1.00	30.03	A
ATOM	280	C	ASP	A	36	51.393	-0.484	30.314	1.00	26.39	A
ATOM	281	O	ASP	A	36	51.016	-0.976	31.378	1.00	27.38	A
ATOM	282	N	LEU	A	37	52.024	-1.187	29.387	1.00	27.51	A
ATOM	283	CA	LEU	A	37	52.305	-2.600	29.588	1.00	29.51	A
ATOM	284	CB	LEU	A	37	52.754	-3.231	28.270	1.00	26.29	A
ATOM	285	CG	LEU	A	37	51.704	-3.111	27.160	1.00	25.10	A
ATOM	286	CD1	LEU	A	37	52.265	-3.630	25.852	1.00	21.32	A
ATOM	287	CD2	LEU	A	37	50.455	-3.876	27.557	1.00	22.51	A
ATOM	288	C	LEU	A	37	53.348	-2.838	30.674	1.00	30.95	A
ATOM	289	O	LEU	A	37	53.222	-3.774	31.457	1.00	31.43	A
ATOM	290	N	GLY	A	38	54.362	-1.980	30.734	1.00	33.46	A
ATOM	291	CA	GLY	A	38	55.403	-2.140	31.737	1.00	35.44	A

ATOM	292	C	GLY A	38	54.956	-1.863	33.162	1.00	37.63	A
ATOM	293	O	GLY A	38	55.369	-2.549	34.098	1.00	38.42	A
ATOM	294	N	ARG A	39	54.101	-0.861	33.334	1.00	38.93	A
ATOM	295	CA	ARG A	39	53.625	-0.499	34.660	1.00	40.81	A
ATOM	296	CB	ARG A	39	53.645	1.029	34.803	1.00	42.41	A
ATOM	297	CG	ARG A	39	54.968	1.627	34.339	1.00	44.76	A
ATOM	298	CD	ARG A	39	55.113	3.118	34.619	1.00	47.83	A
ATOM	299	NE	ARG A	39	56.318	3.644	33.976	1.00	50.52	A
ATOM	300	CZ	ARG A	39	56.902	4.799	34.281	1.00	53.40	A
ATOM	301	NH1	ARG A	39	56.399	5.575	35.235	1.00	54.01	A
ATOM	302	NH2	ARG A	39	57.998	5.179	33.633	1.00	54.18	A
ATOM	303	C	ARG A	39	52.229	-1.057	34.936	1.00	41.12	A
ATOM	304	O	ARG A	39	51.664	-0.847	36.014	1.00	39.71	A
ATOM	305	N	LYS A	40	51.687	-1.779	33.955	1.00	40.65	A
ATOM	306	CA	LYS A	40	50.365	-2.380	34.070	1.00	39.55	A
ATOM	307	CB	LYS A	40	50.415	-3.554	35.053	1.00	42.42	A
ATOM	308	CG	LYS A	40	49.196	-4.467	34.996	1.00	46.46	A
ATOM	309	CD	LYS A	40	49.266	-5.563	36.054	1.00	50.42	A
ATOM	310	CE	LYS A	40	48.077	-6.513	35.947	1.00	51.25	A
ATOM	311	NZ	LYS A	40	46.781	-5.779	35.970	1.00	52.15	A
ATOM	312	C	LYS A	40	49.338	-1.348	34.540	1.00	37.45	A
ATOM	313	O	LYS A	40	48.647	-1.560	35.533	1.00	35.78	A
ATOM	314	N	GLU A	41	49.245	-0.237	33.812	1.00	35.81	A
ATOM	315	CA	GLU A	41	48.317	0.847	34.142	1.00	33.83	A
ATOM	316	CB	GLU A	41	49.077	2.079	34.655	1.00	36.46	A
ATOM	317	CG	GLU A	41	49.660	1.997	36.049	1.00	41.33	A
ATOM	318	CD	GLU A	41	50.500	3.224	36.374	1.00	44.23	A
ATOM	319	OE1	GLU A	41	50.067	4.343	36.022	1.00	46.67	A
ATOM	320	OE2	GLU A	41	51.585	3.076	36.981	1.00	45.55	A
ATOM	321	C	GLU A	41	47.492	1.301	32.937	1.00	30.89	A
ATOM	322	O	GLU A	41	47.995	1.373	31.816	1.00	27.89	A
ATOM	323	N	THR A	42	46.227	1.623	33.182	1.00	28.11	A
ATOM	324	CA	THR A	42	45.354	2.127	32.135	1.00	26.58	A
ATOM	325	CB	THR A	42	43.882	1.773	32.406	1.00	27.67	A
ATOM	326	OG1	THR A	42	43.716	0.349	32.394	1.00	25.55	A
ATOM	327	CG2	THR A	42	42.979	2.419	31.357	1.00	25.33	A
ATOM	328	C	THR A	42	45.506	3.642	32.212	1.00	26.90	A
ATOM	329	O	THR A	42	45.305	4.232	33.269	1.00	25.79	A
ATOM	330	N	VAL A	43	45.881	4.273	31.108	1.00	25.87	A
ATOM	331	CA	VAL A	43	46.045	5.720	31.106	1.00	24.36	A
ATOM	332	CB	VAL A	43	47.474	6.119	30.670	1.00	24.45	A
ATOM	333	CG1	VAL A	43	47.698	7.606	30.906	1.00	24.38	A
ATOM	334	CG2	VAL A	43	48.504	5.289	31.433	1.00	22.82	A
ATOM	335	C	VAL A	43	45.039	6.331	30.141	1.00	24.94	A
ATOM	336	O	VAL A	43	45.143	6.133	28.930	1.00	24.72	A
ATOM	337	N	TRP A	44	44.063	7.065	30.672	1.00	24.50	A
ATOM	338	CA	TRP A	44	43.050	7.681	29.824	1.00	25.64	A
ATOM	339	CB	TRP A	44	41.804	8.033	30.642	1.00	25.03	A
ATOM	340	CG	TRP A	44	41.224	6.859	31.370	1.00	25.96	A
ATOM	341	CD2	TRP A	44	40.281	5.906	30.858	1.00	25.77	A
ATOM	342	CE2	TRP A	44	40.067	4.946	31.870	1.00	26.64	A
ATOM	343	CE3	TRP A	44	39.599	5.766	29.641	1.00	24.94	A
ATOM	344	CD1	TRP A	44	41.529	6.450	32.634	1.00	26.43	A
ATOM	345	NE1	TRP A	44	40.840	5.305	32.942	1.00	26.28	A
ATOM	346	CZ2	TRP A	44	39.197	3.860	31.704	1.00	25.00	A
ATOM	347	CZ3	TRP A	44	38.734	4.688	29.476	1.00	22.40	A
ATOM	348	CH2	TRP A	44	38.542	3.749	30.501	1.00	24.18	A
ATOM	349	C	TRP A	44	43.578	8.925	29.116	1.00	26.30	A
ATOM	350	O	TRP A	44	44.321	9.713	29.700	1.00	24.42	A
ATOM	351	N	CYS A	45	43.193	9.090	27.853	1.00	28.01	A
ATOM	352	CA	CYS A	45	43.635	10.234	27.062	1.00	30.22	A
ATOM	353	CB	CYS A	45	44.069	9.777	25.666	1.00	29.51	A
ATOM	354	SG	CYS A	45	45.547	8.727	25.680	1.00	30.66	A
ATOM	355	C	CYS A	45	42.574	11.317	26.951	1.00	31.06	A
ATOM	356	O	CYS A	45	42.836	12.399	26.428	1.00	34.14	A
ATOM	357	N	LEU A	46	41.375	11.016	27.439	1.00	31.99	A
ATOM	358	CA	LEU A	46	40.261	11.965	27.436	1.00	32.61	A
ATOM	359	CB	LEU A	46	39.137	11.493	26.506	1.00	31.72	A
ATOM	360	CG	LEU A	46	38.810	12.325	25.263	1.00	32.47	A
ATOM	361	CD1	LEU A	46	37.492	11.830	24.674	1.00	28.87	A
ATOM	362	CD2	LEU A	46	38.710	13.810	25.617	1.00	29.99	A
ATOM	363	C	LEU A	46	39.734	12.042	28.869	1.00	32.81	A
ATOM	364	O	LEU A	46	39.195	11.066	29.395	1.00	33.99	A
ATOM	365	N	PRO A	47	39.893	13.201	29.521	1.00	32.52	A

ATOM	366	CD	PRO A	47	40.488	14.442	28.986	1.00	32.23	A
ATOM	367	CA	PRO A	47	39.437	13.392	30.901	1.00	32.18	A
ATOM	368	CB	PRO A	47	39.487	14.908	31.063	1.00	32.11	A
ATOM	369	CG	PRO A	47	40.690	15.270	30.236	1.00	31.60	A
ATOM	370	C	PRO A	47	38.066	12.800	31.245	1.00	30.96	A
ATOM	371	O	PRO A	47	37.927	12.103	32.243	1.00	30.17	A
ATOM	372	N	VAL A	48	37.064	13.068	30.418	1.00	30.75	A
ATOM	373	CA	VAL A	48	35.715	12.563	30.663	1.00	32.56	A
ATOM	374	CB	VAL A	48	34.748	13.040	29.560	1.00	34.04	A
ATOM	375	CG1	VAL A	48	33.320	12.683	29.932	1.00	34.16	A
ATOM	376	CG2	VAL A	48	34.881	14.556	29.368	1.00	38.02	A
ATOM	377	C	VAL A	48	35.633	11.033	30.765	1.00	33.13	A
ATOM	378	O	VAL A	48	34.698	10.485	31.355	1.00	33.55	A
ATOM	379	N	LEU A	49	36.615	10.350	30.192	1.00	33.30	A
ATOM	380	CA	LEU A	49	36.661	8.892	30.208	1.00	32.44	A
ATOM	381	CB	LEU A	49	37.498	8.391	29.023	1.00	30.62	A
ATOM	382	CG	LEU A	49	36.792	8.027	27.702	1.00	31.64	A
ATOM	·383	CD1	LEU A	49	35.578	8.888	27.464	1.00	29.12	A
ATOM	384	CD2	LEU A	49	37.783	8.157	26.551	1.00	31.05	A
ATOM	385	C	LEU A	49	37.226	8.343	31.519	1.00	33.77	A
ATOM	386	O	LEU A	49	37.138	7.142	31.787	1.00	34.14	A
ATOM	387	N	ARG A	50	37.794	9.221	32.339	1.00	34.56	A
ATOM	388	CA	ARG A	50	38.367	8.810	33.618	1.00	35.58	A
ATOM	389	CB	ARG A	50	38.987	10.009	34.345	1.00	37.99	A
ATOM	390	CG	ARG A	50	40.137	10.720	33.636	1.00	40.65	A
ATOM	391	CD	ARG A	50	40.657	11.846	34.529	1.00	43.05	A
ATOM	392	NE	ARG A	50	41.603	12.748	33.872	1.00	44.85	A
ATOM	393	CZ	ARG A	50	42.815	12.403	33.444	1.00	46.08	A
ATOM	394	NH1	ARG A	50	43.254	11.159	33.592	1.00	46.76	A
ATOM	395	NH2	ARG A	50	43.599	13.314	32.880	1.00	46.08	A
ATOM	396	C	ARG A	50	37.334	8.168	34.547	1.00	35.55	A
ATOM	397	O	ARG A	50	37.693	7.475	35.495	1.00	35.21	A
ATOM	398	N	GLN A	51	36.054	8.412	34.284	1.00	36.77	A
ATOM	399	CA	GLN A	51	34.987	7.859	35.116	1.00	37.34	A
ATOM	400	CB	GLN A	51	33.658	8.558	34.821	1.00	39.02	A
ATOM	401	CG	GLN A	51	33.123	8.306	33.418	1.00	41.24	A
ATOM	402	CD	GLN A	51	31.765	8.947	33.189	1.00	43.49	A
ATOM	403	OE1	GLN A	51	30.781	8.597	33.843	1.00	43.80	A
ATOM	404	NE2	GLN A	51	31.706	9.895	32.260	1.00	44.01	A
ATOM	405	C	GLN A	51	34.821	6.362	34.896	1.00	36.85	A
ATOM	406	O	GLN A	51	34.250	5.665	35.734	1.00	37.06	A
ATOM	407	N	PHE A	52	35.316	5.871	33.764	1.00	35.13	A
ATOM	408	CA	PHE A	52	35.218	4.454	33.446	1.00	32.82	A
ATOM	409	CB	PHE A	52	35.143	4.258	31.931	1.00	31.28	A
ATOM	410	CG	PHE A	52	33.902	4.838	31.301	1.00	29.86	A
ATOM	411	CD1	PHE A	52	32.640	4.549	31.821	1.00	27.82	A
ATOM	412	CD2	PHE A	52	33.992	5.652	30.177	1.00	27.71	A
ATOM	413	CE1	PHE A	52	31.490	5.060	31.234	1.00	25.58	A
ATOM	414	CE2	PHE A	52	32.847	6.171	29.580	1.00	28.10	A
ATOM	415	CZ	PHE A	52	31.592	5.873	30.111	1.00	28.21	A
ATOM	416	C	PHE A	52	36.405	3.675	34.004	1.00	32.57	A
ATOM	417	O	PHE A	52	37.370	4.256	34.494	1.00	32.22	A
ATOM	418	N	ARG A	53	36.327	2.353	33.927	1.00	32.80	A
ATOM	419	CA	ARG A	53	37.397	1.498	34.419	1.00	32.77	A
ATOM	420	CB	ARG A	53	37.005	0.862	35.760	1.00	36.56	A
ATOM	421	CG	ARG A	53	36.741	1.867	36.881	1.00	42.83	A
ATOM	422	CD	ARG A	53	36.523	1.168	38.214	1.00	49.04	A
ATOM	423	NE	ARG A	53	36.308	2.111	39.312	1.00	53.82	A
ATOM	424	CZ	ARG A	53	36.195	1.758	40.589	1.00	54.70	A
ATOM	425	NH1	ARG A	53	36.277	0.478	40.937	1.00	55.50	A
ATOM	426	NH2	ARG A	53	36.004	2.683	41.520	1.00	55.64	A
ATOM	427	C	ARG A	53	37.706	0.404	33.405	1.00	29.88	A
ATOM	428	O	ARG A	53	36.806	-0.117	32.743	1.00	28.71	A
ATOM	429	N	PHE A	54	38.986	0.066	33.293	1.00	26.44	A
ATOM	430	CA	PHE A	54	39.440	-0.960	32.371	1.00	22.47	A
ATOM	431	CB	PHE A	54	39.905	-0.325	31.060	1.00	21.88	A
ATOM	432	CG	PHE A	54	40.181	-1.320	29.974	1.00	20.69	A
ATOM	433	CD1	PHE A	54	39.150	-1.801	29.180	1.00	19.52	A
ATOM	434	CD2	PHE A	54	41.471	-1.782	29.750	1.00	18.68	A
ATOM	435	CE1	PHE A	54	39.399	-2.734	28.170	1.00	22.81	A
ATOM	436	CE2	PHE A	54	41.733	-2.714	28.746	1.00	20.58	A
ATOM	437	CZ	PHE A	54	40.697	-3.190	27.954	1.00	20.86	A
ATOM	438	C	PHE A	54	40.597	-1.711	33.017	1.00	23.43	A
ATOM	439	O	PHE A	54	41.631	-1.122	33.351	1.00	23.53	A

ATOM	440	N	ASP	A	55	40.408	-3.011	33.198	1.00	22.82	A
ATOM	441	CA	ASP	A	55	41.411	-3.874	33.805	1.00	24.70	A
ATOM	442	CB	ASP	A	55	40.785	-5.246	34.083	1.00	23.26	A
ATOM	443	CG	ASP	A	55	41.729	-6.190	34.789	1.00	26.24	A
ATOM	444	OD1	ASP	A	55	42.924	-5.853	34.933	1.00	28.75	A
ATOM	445	OD2	ASP	A	55	41.274	-7.279	35.192	1.00	26.38	A
ATOM	446	C	ASP	A	55	42.613	-4.011	32.861	1.00	24.24	A
ATOM	447	O	ASP	A	55	42.510	-4.629	31.802	1.00	23.91	A
ATOM	448	N	PRO	A	56	43.770	-3.437	33.238	1.00	23.69	A
ATOM	449	CD	PRO	A	56	44.084	-2.761	34.509	1.00	23.79	A
ATOM	450	CA	PRO	A	56	44.961	-3.522	32.387	1.00	23.45	A
ATOM	451	CB	PRO	A	56	46.002	-2.707	33.162	1.00	23.35	A
ATOM	452	CG	PRO	A	56	45.592	-2.897	34.580	1.00	23.31	A
ATOM	453	C	PRO	A	56	45.413	-4.952	32.114	1.00	23.66	A
ATOM	454	O	PRO	A	56	46.099	-5.220	31.125	1.00	23.15	A
ATOM	455	N	GLN	A	57	45.025	-5.871	32.991	1.00	21.84	A
ATOM	456	CA	GLN	A	57	45.397	-7.261	32.818	1.00	22.47	A
ATOM	457	CB	GLN	A	57	44.834	-8.108	33.965	1.00	23.11	A
ATOM	458	CG	GLN	A	57	45.226	-9.568	33.873	1.00	20.82	A
ATOM	459	CD	GLN	A	57	46.722	-9.745	33.733	1.00	22.23	A
ATOM	460	OE1	GLN	A	57	47.497	-9.227	34.539	1.00	21.88	A
ATOM	461	NE2	GLN	A	57	47.138	-10.475	32.707	1.00	23.15	A
ATOM	462	C	GLN	A	57	44.882	-7.792	31.482	1.00	22.21	A
ATOM	463	O	GLN	A	57	45.452	-8.723	30.913	1.00	23.00	A
ATOM	464	N	PHE	A	58	43.801	-7.203	30.980	1.00	22.42	A
ATOM	465	CA	PHE	A	58	43.254	-7.640	29.704	1.00	21.07	A
ATOM	466	CB	PHE	A	58	42.004	-6.857	29.338	1.00	20.45	A
ATOM	467	CG	PHE	A	58	41.411	-7.287	28.031	1.00	21.03	A
ATOM	468	CD1	PHE	A	58	40.472	-8.312	27.988	1.00	18.42	A
ATOM	469	CD2	PHE	A	58	41.864	-6.736	26.835	1.00	18.79	A
ATOM	470	CE1	PHE	A	58	39.992	-8.792	26.765	1.00	21.25	A
ATOM	471	CE2	PHE	A	58	41.393	-7.207	25.610	1.00	20.28	A
ATOM	472	CZ	PHE	A	58	40.457	-8.238	25.578	1.00	21.18	A
ATOM	473	C	PHE	A	58	44.278	-7.401	28.612	1.00	21.79	A
ATOM	474	O	PHE	A	58	44.529	-8.260	27.763	1.00	21.84	A
ATOM	475	N	ALA	A	59	44.849	-6.202	28.637	1.00	21.80	A
ATOM	476	CA	ALA	A	59	45.840	-5.801	27.657	1.00	21.67	A
ATOM	477	CB	ALA	A	59	46.254	-4.346	27.892	1.00	21.11	A
ATOM	478	C	ALA	A	59	47.053	-6.711	27.732	1.00	22.06	A
ATOM	479	O	ALA	A	59	47.518	-7.213	26.706	1.00	22.53	A
ATOM	480	N	LEU	A	60	47.561	-6.925	28.945	1.00	19.83	A
ATOM	481	CA	LEU	A	60	48.729	-7.777	29.116	1.00	20.88	A
ATOM	482	CB	LEU	A	60	49.163	-7.815	30.585	1.00	20.57	A
ATOM	483	CG	LEU	A	60	50.060	-6.657	31.053	1.00	24.17	A
ATOM	484	CD1	LEU	A	60	49.239	-5.392	31.205	1.00	24.16	A
ATOM	485	CD2	LEU	A	60	50.717	-7.012	32.382	1.00	24.31	A
ATOM	486	C	LEU	A	60	48.496	-9.193	28.598	1.00	20.44	A
ATOM	487	O	LEU	A	60	49.367	-9.770	27.955	1.00	21.97	A
ATOM	488	N	THR	A	61	47.319	-9.749	28.871	1.00	20.69	A
ATOM	489	CA	THR	A	61	46.997	-11.101	28.418	1.00	19.49	A
ATOM	490	CB	THR	A	61	45.697	-11.629	29.084	1.00	18.59	A
ATOM	491	OG1	THR	A	61	45.919	-11.830	30.489	1.00	21.12	A
ATOM	492	CG2	THR	A	61	45.274	-12.942	28.453	1.00	17.61	A
ATOM	493	C	THR	A	61	46.834	-11.140	26.903	1.00	19.22	A
ATOM	494	O	THR	A	61	47.325	-12.059	26.242	1.00	21.19	A
ATOM	495	N	ASN	A	62	46.152	-10.142	26.351	1.00	18.05	A
ATOM	496	CA	ASN	A	62	45.934	-10.092	24.910	1.00	19.26	A
ATOM	497	CB	ASN	A	62	45.020	-8.910	24.552	1.00	20.51	A
ATOM	498	CG	ASN	A	62	43.835	-9.324	23.680	1.00	22.06	A
ATOM	499	OD1	ASN	A	62	43.406	-10.482	23.693	1.00	21.71	A
ATOM	500	ND2	ASN	A	62	43.294	-8.371	22.930	1.00	20.64	A
ATOM	501	C	ASN	A	62	47.270	-9.975	24.188	1.00	18.14	A
ATOM	502	O	ASN	A	62	47.517	-10.681	23.217	1.00	19.73	A
ATOM	503	N	ILE	A	63	48.146	-9.108	24.684	1.00	18.98	A
ATOM	504	CA	ILE	A	63	49.448	-8.921	24.061	1.00	19.88	A
ATOM	505	CB	ILE	A	63	50.229	-7.757	24.725	1.00	21.31	A
ATOM	506	CG2	ILE	A	63	51.601	-7.590	24.064	1.00	20.11	A
ATOM	507	CG1	ILE	A	63	49.425	-6.457	24.599	1.00	20.91	A
ATOM	508	CD1	ILE	A	63	49.037	-6.092	23.171	1.00	16.67	A
ATOM	509	C	ILE	A	63	50.247	-10.212	24.169	1.00	20.35	A
ATOM	510	O	ILE	A	63	51.048	-10.538	23.297	1.00	21.37	A
ATOM	511	N	ALA	A	64	50.028	-10.949	25.247	1.00	22.48	A
ATOM	512	CA	ALA	A	64	50.713	-12.222	25.423	1.00	23.35	A
ATOM	513	CB	ALA	A	64	50.373	-12.816	26.785	1.00	22.29	A

ATOM	514	C	ALA A	64	50.252	-13.158	24.301	1.00	23.03	A
ATOM	515	O	ALA A	64	51.032	-13.939	23.766	1.00	25.08	A
ATOM	516	N	VAL A	65	48.976	-13.072	23.948	1.00	23.28	A
ATOM	517	CA	VAL A	65	48.437	-13.905	22.888	1.00	22.97	A
ATOM	518	CB	VAL A	65	46.887	-13.840	22.859	1.00	24.28	A
ATOM	519	CG1	VAL A	65	46.338	-14.722	21.729	1.00	22.40	A
ATOM	520	CG2	VAL A	65	46.325	-14.296	24.209	1.00	19.61	A
ATOM	521	C	VAL A	65	49.013	-13.471	21.538	1.00	23.88	A
ATOM	522	O	VAL A	65	49.313	-14.314	20.692	1.00	22.01	A
ATOM	523	N	LEU A	66	49.179	-12.164	21.332	1.00	24.00	A
ATOM	524	CA	LEU A	66	49.747	-11.692	20.064	1.00	24.66	A
ATOM	525	CB	LEU A	66	49.872	-10.171	20.011	1.00	22.13	A
ATOM	526	CG	LEU A	66	48.679	-9.228	20.117	1.00	23.81	A
ATOM	527	CD1	LEU A	66	49.014	-8.001	19.277	1.00	20.24	A
ATOM	528	CD2	LEU A	66	47.407	-9.866	19.627	1.00	20.49	A
ATOM	529	C	LEU A	66	51.143	-12.267	19.906	1.00	23.53	A
ATOM	530	O	LEU A	66	51.548	-12.644	18.813	1.00	22.08	A
ATOM	531	N	LYS A	67	51.879	-12.303	21.011	1.00	26.17	A
ATOM	532	CA	LYS A	67	53.237	-12.832	21.019	1.00	28.99	A
ATOM	533	CB	LYS A	67	53.839	-12.698	22.421	1.00	29.27	A
ATOM	534	CG	LYS A	67	55.278	-13.174	22.548	1.00	30.64	A
ATOM	535	CD	LYS A	67	55.779	-13.001	23.976	1.00	32.41	A
ATOM	536	CE	LYS A	67	57.159	-13.609	24.157	1.00	35.25	A
ATOM	537	NZ	LYS A	67	58.144	-13.036	23.199	1.00	38.78	A
ATOM	538	C	LYS A	67	53.200	-14.299	20.598	1.00	29.87	A
ATOM	539	O	LYS A	67	53.952	-14.719	19.716	1.00	30.35	A
ATOM	540	N	HIS A	68	52.313	-15.066	21.230	1.00	30.48	A
ATOM	541	CA	HIS A	68	52.163	-16.483	20.922	1.00	31.95	A
ATOM	542	CB	HIS A	68	51.051	-17.097	21.775	1.00	34.42	A
ATOM	543	CG	HIS A	68	50.827	-18.557	21.520	1.00	38.63	A
ATOM	544	CD2	HIS A	68	49.859	-19.203	20.826	1.00	40.18	A
ATOM	545	ND1	HIS A	68	51.676	-19.536	21.992	1.00	41.00	A
ATOM	546	CE1	HIS A	68	51.241	-20.721	21.601	1.00	39.93	A
ATOM	547	NE2	HIS A	68	50.141	-20.547	20.891	1.00	39.69	A
ATOM	548	C	HIS A	68	51.828	-16.660	19.448	1.00	31.53	A
ATOM	549	O	HIS A	68	52.463	-17.447	18.746	1.00	32.07	A
ATOM	550	N	ASN A	69	50.826	-15.928	18.977	1.00	29.53	A
ATOM	551	CA	ASN A	69	50.427	-16.024	17.583	1.00	29.99	A
ATOM	552	CB	ASN A	69	49.180	-15.173	17.332	1.00	30.27	A
ATOM	553	CG	ASN A	69	47.918	-15.814	17.885	1.00	31.83	A
ATOM	554	OD1	ASN A	69	47.986	-16.728	18.703	1.00	32.19	A
ATOM	555	ND2	ASN A	69	46.759	-15.328	17.447	1.00	31.41	A
ATOM	556	C	ASN A	69	51.552	-15.602	16.638	1.00	30.37	A
ATOM	557	O	ASN A	69	51.722	-16.186	15.571	1.00	29.41	A
ATOM	558	N	LEU A	70	52.324	-14.593	17.026	1.00	29.86	A
ATOM	559	CA	LEU A	70	53.413	-14.131	16.175	1.00	31.35	A
ATOM	560	CB	LEU A	70	54.039	-12.857	16.751	1.00	28.55	A
ATOM	561	CG	LEU A	70	55.190	-12.237	15.950	1.00	28.77	A
ATOM	562	CD1	LEU A	70	54.745	-11.949	14.519	1.00	28.48	A
ATOM	563	CD2	LEU A	70	55.651	-10.957	16.627	1.00	27.89	A
ATOM	564	C	LEU A	70	54.479	-15.214	16.009	1.00	31.92	A
ATOM	565	O	LEU A	70	54.994	-15.422	14.914	1.00	31.72	A
ATOM	566	N	ASN A	71	54.798	-15.905	17.097	1.00	34.09	A
ATOM	567	CA	ASN A	71	55.801	-16.968	17.060	1.00	38.27	A
ATOM	568	CB	ASN A	71	55.884	-17.651	18.427	1.00	39.70	A
ATOM	569	CG	ASN A	71	56.490	-16.748	19.490	1.00	44.05	A
ATOM	570	OD1	ASN A	71	56.290	-16.955	20.693	1.00	44.98	A
ATOM	571	ND2	ASN A	71	57.247	-15.746	19.049	1.00	44.44	A
ATOM	572	C	ASN A	71	55.484	-18.003	15.983	1.00	38.32	A
ATOM	573	O	ASN A	71	56.358	-18.417	15.224	1.00	37.91	A
ATOM	574	N	SER A	72	54.221	-18.407	15.919	1.00	39.93	A
ATOM	575	CA	SER A	72	53.780	-19.390	14.944	1.00	40.10	A
ATOM	576	CB	SER A	72	52.341	-19.816	15.256	1.00	41.05	A
ATOM	577	OG	SER A	72	51.867	-20.763	14.311	1.00	42.44	A
ATOM	578	C	SER A	72	53.860	-18.838	13.523	1.00	40.66	A
ATOM	579	O	SER A	72	54.336	-19.516	12.608	1.00	40.90	A
ATOM	580	N	LEU A	73	53.391	-17.608	13.341	1.00	39.86	A
ATOM	581	CA	LEU A	73	53.408	-16.973	12.030	1.00	39.32	A
ATOM	582	CB	LEU A	73	52.676	-15.632	12.082	1.00	38.99	A
ATOM	583	CG	LEU A	73	51.221	-15.651	11.598	1.00	40.31	A
ATOM	584	CD1	LEU A	73	50.482	-16.860	12.152	1.00	39.79	A
ATOM	585	CD2	LEU A	73	50.539	-14.363	12.024	1.00	40.04	A
ATOM	586	C	LEU A	73	54.816	-16.778	11.492	1.00	38.55	A
ATOM	587	O	LEU A	73	55.028	-16.806	10.280	1.00	36.83	A

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ATOM	588	N	ILE A	74	55.780	-16.576	12.383	1.00	39.70	A
ATOM	589	CA	ILE A	74	57.158	-16.402	11.942	1.00	41.87	A
ATOM	590	CB	ILE A	74	58.104	-16.084	13.123	1.00	41.88	A
ATOM	591	CG2	ILE A	74	59.552	-16.054	12.640	1.00	41.29	A
ATOM	592	CG1	ILE A	74	57.729	-14.734	13.738	1.00	41.53	A
ATOM	593	CD1	ILE A	74	58.519	-14.380	14.990	1.00	40.94	A
ATOM	594	C	ILE A	74	57.599	-17.699	11.273	1.00	42.04	A
ATOM	595	O	ILE A	74	58.119	-17.689	10.157	1.00	41.12	A
ATOM	596	N	LYS A	75	57.364	-18.816	11.954	1.00	43.51	A
ATOM	597	CA	LYS A	75	57.730	-20.125	11.423	1.00	46.61	A
ATOM	598	CB	LYS A	75	57.470	-21.217	12.466	1.00	47.84	A
ATOM	599	CG	LYS A	75	58.096	-20.964	13.828	1.00	50.82	A
ATOM	600	CD	LYS A	75	57.661	-22.029	14.828	1.00	53.97	A
ATOM	601	CE	LYS A	75	58.005	-21.646	16.269	1.00	55.95	A
ATOM	602	NZ	LYS A	75	59.472	-21.572	16.531	1.00	56.31	A
ATOM	603	C	LYS A	75	56.944	-20.452	10.151	1.00	47.99	A
ATOM	604	O	LYS A	75	57.530	-20.720	9.106	1.00	48.11	A
ATOM	605	N	ARG A	76	55.617	-20.419	10.242	1.00	49.31	A
ATOM	606	CA	ARG A	76	54.763	-20.742	9.103	1.00	50.89	A
ATOM	607	CB	ARG A	76	53.287	-20.744	9.530	1.00	53.08	A
ATOM	608	CG	ARG A	76	52.960	-21.847	10.538	1.00	56.83	A
ATOM	609	CD	ARG A	76	51.478	-22.247	10.574	1.00	58.85	A
ATOM	610	NE	ARG A	76	50.620	-21.253	11.212	1.00	60.24	A
ATOM	611	CZ	ARG A	76	49.786	-20.452	10.557	1.00	61.29	A
ATOM	612	NH1	ARG A	76	49.692	-20.526	9.234	1.00	60.08	A
ATOM	613	NH2	ARG A	76	49.044	-19.578	11.226	1.00	61.97	A
ATOM	614	C	ARG A	76	54.947	-19.871	7.864	1.00	50.93	A
ATOM	615	O	ARG A	76	54.705	-20.324	6.747	1.00	51.19	A
ATOM	616	N	SER A	77	55.380	-18.630	8.046	1.00	50.61	A
ATOM	617	CA	SER A	77	55.574	-17.745	6.900	1.00	50.08	A
ATOM	618	CB	SER A	77	55.262	-16.295	7.282	1.00	50.05	A
ATOM	619	OG	SER A	77	56.223	-15.787	8.193	1.00	49.23	A
ATOM	620	C	SER A	77	57.006	-17.827	6.386	1.00	49.56	A
ATOM	621	O	SER A	77	57.420	-17.015	5.558	1.00	49.40	A
ATOM	622	N	ASN A	78	57.752	-18.817	6.866	1.00	49.24	A
ATOM	623	CA	ASN A	78	59.148	-18.982	6.472	1.00	49.14	A
ATOM	624	CB	ASN A	78	59.256	-19.307	4.976	1.00	48.86	A
ATOM	625	CG	ASN A	78	60.668	-19.689	4.558	1.00	48.09	A
ATOM	626	OD1	ASN A	78	61.347	-20.442	5.254	1.00	46.05	A
ATOM	627	ND2	ASN A	78	61.109	-19.182	3.409	1.00	47.78	A
ATOM	628	C	ASN A	78	59.857	-17.667	6.803	1.00	49.08	A
ATOM	629	O	ASN A	78	60.614	-17.114	6.001	1.00	48.39	A
ATOM	630	N	SER A	79	59.571	-17.177	8.006	1.00	48.58	A
ATOM	631	CA	SER A	79	60.139	-15.945	8.538	1.00	48.38	A
ATOM	632	CB	SER A	79	61.549	-16.208	9.071	1.00	48.53	A
ATOM	633	OG	SER A	79	62.415	-16.612	8.027	1.00	50.05	A
ATOM	634	C	SER A	79	60.176	-14.768	7.573	1.00	47.13	A
ATOM	635	O	SER A	79	61.197	-14.098	7.444	1.00	47.66	A
ATOM	636	N	THR A	80	59.069	-14.516	6.887	1.00	45.82	A
ATOM	637	CA	THR A	80	59.008	-13.379	5.982	1.00	45.51	A
ATOM	638	CB	THR A	80	57.814	-13.501	5.016	1.00	47.03	A
ATOM	639	OG1	THR A	80	56.663	-13.963	5.731	1.00	47.95	A
ATOM	640	CG2	THR A	80	58.134	-14.487	3.909	1.00	47.59	A
ATOM	641	C	THR A	80	58.855	-12.147	6.882	1.00	44.25	A
ATOM	642	O	THR A	80	57.835	-11.976	7.556	1.00	43.69	A
ATOM	643	N	ALA A	81	59.889	-11.311	6.903	1.00	41.47	A
ATOM	644	CA	ALA A	81	59.916	-10.119	7.740	1.00	38.59	A
ATOM	645	CB	ALA A	81	61.363	-9.734	8.039	1.00	38.61	A
ATOM	646	C	ALA A	81	59.168	-8.915	7.185	1.00	36.89	A
ATOM	647	O	ALA A	81	58.766	-8.884	6.018	1.00	35.83	A
ATOM	648	N	ALA A	82	58.993	-7.920	8.050	1.00	34.86	A
ATOM	649	CA	ALA A	82	58.300	-6.690	7.698	1.00	33.41	A
ATOM	650	CB	ALA A	82	57.957	-5.912	8.961	1.00	34.17	A
ATOM	651	C	ALA A	82	59.141	-5.824	6.770	1.00	32.28	A
ATOM	652	O	ALA A	82	60.372	-5.807	6.859	1.00	28.62	A
ATOM	653	N	THR A	83	58.457	-5.113	5.878	1.00	31.60	A
ATOM	654	CA	THR A	83	59.100	-4.217	4.931	1.00	32.87	A
ATOM	655	CB	THR A	83	58.377	-4.224	3.575	1.00	34.31	A
ATOM	656	OG1	THR A	83	58.347	-5.562	3.058	1.00	36.90	A
ATOM	657	CG2	THR A	83	59.098	-3.309	2.578	1.00	34.35	A
ATOM	658	C	THR A	83	59.041	-2.808	5.500	1.00	32.84	A
ATOM	659	O	THR A	83	58.029	-2.406	6.067	1.00	33.97	A
ATOM	660	N	ASN A	84	60.130	-2.062	5.356	1.00	34.76	A
ATOM	661	CA	ASN A	84	60.188	-0.697	5.858	1.00	34.66	A

ATOM	662	CB	ASN A	84	61.634	-0.252	6.069	1.00	36.13	A
ATOM	663	CG	ASN A	84	62.337	-1.045	7.132	1.00	37.22	A
ATOM	664	OD1	ASN A	84	61.809	-1.241	8.220	1.00	39.34	A
ATOM	665	ND2	ASN A	84	63.548	-1.497	6.830	1.00	38.89	A
ATOM	666	C	ASN A	84	59.549	0.267	4.881	1.00	35.51	A
ATOM	667	O	ASN A	84	59.961	0.343	3.724	1.00	38.89	A
ATOM	668	N	GLU A	85	58.546	1.004	5.344	1.00	34.17	A
ATOM	669	CA	GLU A	85	57.890	2.001	4.507	1.00	32.82	A
ATOM	670	CB	GLU A	85	56.427	2.183	4.921	1.00	36.55	A
ATOM	671	CG	GLU A	85	55.523	0.993	4.645	1.00	42.74	A
ATOM	672	CD	GLU A	85	55.271	0.782	3.167	1.00	46.65	A
ATOM	673	OE1	GLU A	85	54.829	1.741	2.494	1.00	49.22	A
ATOM	674	OE2	GLU A	85	55.508	-0.345	2.679	1.00	48.74	A
ATOM	675	C	GLU A	85	58.624	3.328	4.701	1.00	30.10	A
ATOM	676	O	GLU A	85	59.489	3.453	5.571	1.00	27.29	A
ATOM	677	N	VAL A	86	58.274	4.308	3.878	1.00	28.67	A
ATOM	678	CA	VAL A	86	58.849	5.641	3.951	1.00	27.33	A
ATOM	679	CB	VAL A	86	59.146	6.202	2.539	1.00	27.74	A
ATOM	680	CG1	VAL A	86	59.688	7.637	2.640	1.00	22.06	A
ATOM	681	CG2	VAL A	86	60.139	5.289	1.815	1.00	25.30	A
ATOM	682	C	VAL A	86	57.786	6.519	4.614	1.00	27.98	A
ATOM	683	O	VAL A	86	56.685	6.671	4.086	1.00	28.76	A
ATOM	684	N	PRO A	87	58.095	7.098	5.784	1.00	27.39	A
ATOM	685	CD	PRO A	87	59.268	6.861	6.644	1.00	26.00	A
ATOM	686	CA	PRO A	87	57.106	7.949	6.458	1.00	28.38	A
ATOM	687	CB	PRO A	87	57.611	7.989	7.899	1.00	26.97	A
ATOM	688	CG	PRO A	87	59.099	7.915	7.727	1.00	27.97	A
ATOM	689	C	PRO A	87	56.963	9.341	5.848	1.00	30.15	A
ATOM	690	O	PRO A	87	57.902	9.871	5.245	1.00	31.62	A
ATOM	691	N	GLU A	88	55.778	9.922	6.004	1.00	29.70	A
ATOM	692	CA	GLU A	88	55.489	11.252	5.481	1.00	29.65	A
ATOM	693	CB	GLU A	88	54.173	11.229	4.699	1.00	32.09	A
ATOM	694	CG	GLU A	88	54.038	12.330	3.655	1.00	38.40	A
ATOM	695	CD	GLU A	88	52.790	12.172	2.792	1.00	41.07	A
ATOM	696	OE1	GLU A	88	51.675	12.411	3.303	1.00	42.35	A
ATOM	697	OE2	GLU A	88	52.925	11.800	1.604	1.00	43.46	A
ATOM	698	C	GLU A	88	55.385	12.191	6.680	1.00	27.98	A
ATOM	699	O	GLU A	88	54.588	11.954	7.597	1.00	26.16	A
ATOM	700	N	VAL A	89	56.187	13.253	6.672	1.00	23.90	A
ATOM	701	CA	VAL A	89	56.201	14.194	7.788	1.00	21.62	A
ATOM	702	CB	VAL A	89	57.637	14.358	8.333	1.00	18.36	A
ATOM	703	CG1	VAL A	89	57.639	15.295	9.534	1.00	17.11	A
ATOM	704	CG2	VAL A	89	58.204	12.990	8.719	1.00	16.77	A
ATOM	705	C	VAL A	89	55.626	15.575	7.483	1.00	21.60	A
ATOM	706	O	VAL A	89	55.859	16.143	6.420	1.00	21.72	A
ATOM	707	N	THR A	90	54.886	16.115	8.444	1.00	21.28	A
ATOM	708	CA	THR A	90	54.269	17.425	8.301	1.00	20.62	A
ATOM	709	CB	THR A	90	52.813	17.303	7.823	1.00	21.90	A
ATOM	710	OG1	THR A	90	52.770	16.537	6.613	1.00	26.43	A
ATOM	711	CG2	THR A	90	52.220	18.678	7.558	1.00	23.70	A
ATOM	712	C	THR A	90	54.264	18.153	9.639	1.00	21.08	A
ATOM	713	O	THR A	90	53.887	17.578	10.667	1.00	20.41	A
ATOM	714	N	VAL A	91	54.670	19.423	9.618	1.00	19.24	A
ATOM	715	CA	VAL A	91	54.712	20.243	10.822	1.00	19.55	A
ATOM	716	CB	VAL A	91	56.149	20.739	11.102	1.00	19.97	A
ATOM	717	CG1	VAL A	91	56.167	21.629	12.338	1.00	16.82	A
ATOM	718	CG2	VAL A	91	57.072	19.547	11.280	1.00	17.43	A
ATOM	719	C	VAL A	91	53.789	21.452	10.703	1.00	19.10	A
ATOM	720	O	VAL A	91	53.735	22.108	9.666	1.00	20.59	A
ATOM	721	N	PHE A	92	53.059	21.739	11.772	1.00	18.65	A
ATOM	722	CA	PHE A	92	52.146	22.870	11.785	1.00	19.10	A
ATOM	723	CB	PHE A	92	50.853	22.516	11.030	1.00	18.89	A
ATOM	724	CG	PHE A	92	50.176	21.264	11.525	1.00	16.16	A
ATOM	725	CD1	PHE A	92	49.165	21.331	12.480	1.00	16.77	A
ATOM	726	CD2	PHE A	92	50.561	20.017	11.047	1.00	16.62	A
ATOM	727	CE1	PHE A	92	48.543	20.168	12.955	1.00	18.06	A
ATOM	728	CE2	PHE A	92	49.954	18.848	11.511	1.00	18.17	A
ATOM	729	CZ	PHE A	92	48.936	18.922	12.471	1.00	17.05	A
ATOM	730	C	PHE A	92	51.844	23.236	13.229	1.00	19.48	A
ATOM	731	O	PHE A	92	52.055	22.430	14.134	1.00	19.64	A
ATOM	732	N	SER A	93	51.365	24.453	13.445	1.00	18.69	A
ATOM	733	CA	SER A	93	51.052	24.896	14.792	1.00	19.26	A
ATOM	734	CB	SER A	93	51.275	26.408	14.921	1.00	17.24	A
ATOM	735	OG	SER A	93	50.435	27.132	14.043	1.00	20.17	A

ATOM	736	C	SER A	93	49.618	24.554	15.172	1.00	19.04	A
ATOM	737	O	SER A	93	48.748	24.417	14.316	1.00	17.44	A
ATOM	738	N	LYS A	94	49.390	24.418	16.472	1.00	20.26	A
ATOM	739	CA	LYS A	94	48.077	24.108	17.010	1.00	21.70	A
ATOM	740	CB	LYS A	94	48.227	23.670	18.464	1.00	22.45	A
ATOM	741	CG	LYS A	94	46.938	23.273	19.139	1.00	24.42	A
ATOM	742	CD	LYS A	94	47.189	22.867	20.587	1.00	25.48	A
ATOM	743	CE	LYS A	94	45.881	22.548	21.297	1.00	25.73	A
ATOM	744	NZ	LYS A	94	45.122	21.533	20.517	1.00	26.34	A
ATOM	745	C	LYS A	94	47.169	25.340	16.921	1.00	23.44	A
ATOM	746	O	LYS A	94	45.984	25.235	16.598	1.00	20.95	A
ATOM	747	N	SER A	95	47.742	26.505	17.212	1.00	24.82	A
ATOM	748	CA	SER A	95	47.013	27.769	17.172	1.00	27.69	A
ATOM	749	CB	SER A	95	46.969	28.408	18.565	1.00	26.33	A
ATOM	750	OG	SER A	95	46.202	27.635	19.468	1.00	32.56	A
ATOM	751	C	SER A	95	47.688	28.747	16.219	1.00	27.36	A
ATOM	752	O	SER A	95	48.824	28.529	15.797	1.00	27.94	A
ATOM	753	N	PRO A	96	46.985	29.830	15.849	1.00	27.27	A
ATOM	754	CD	PRO A	96	45.611	30.232	16.193	1.00	28.85	A
ATOM	755	CA	PRO A	96	47.606	30.801	14.946	1.00	26.90	A
ATOM	756	CB	PRO A	96	46.471	31.788	14.663	1.00	28.13	A
ATOM	757	CG	PRO A	96	45.634	31.719	15.907	1.00	28.36	A
ATOM	758	C	PRO A	96	48.786	31.421	15.700	1.00	24.92	A
ATOM	759	O	PRO A	96	48.757	31.556	16.925	1.00	24.65	A
ATOM	760	N	VAL A	97	49.828	31.786	14.973	1.00	24.24	A
ATOM	761	CA	VAL A	97	51.016	32.332	15.601	1.00	25.15	A
ATOM	762	CB	VAL A	97	52.261	32.087	14.715	1.00	26.78	A
ATOM	763	CG1	VAL A	97	53.531	32.372	15.508	1.00	26.15	A
ATOM	764	CG2	VAL A	97	52.255	30.659	14.198	1.00	26.15	A
ATOM	765	C	VAL A	97	50.935	33.820	15.920	1.00	25.62	A
ATOM	766	O	VAL A	97	50.624	34.638	15.054	1.00	25.01	A
ATOM	767	N	THR A	98	51.207	34.157	17.175	1.00	24.46	A
ATOM	768	CA	THR A	98	51.212	35.542	17.627	1.00	25.36	A
ATOM	769	CB	THR A	98	49.835	35.941	18.283	1.00	25.29	A
ATOM	770	OG1	THR A	98	50.030	37.008	19.217	1.00	30.50	A
ATOM	771	CG2	THR A	98	49.196	34.771	18.985	1.00	29.80	A
ATOM	772	C	THR A	98	52.382	35.678	18.605	1.00	24.87	A
ATOM	773	O	THR A	98	52.499	34.902	19.554	1.00	23.01	A
ATOM	774	N	LEU A	99	53.273	36.634	18.344	1.00	25.94	A
ATOM	775	CA	LEU A	99	54.445	36.843	19.198	1.00	28.02	A
ATOM	776	CB	LEU A	99	55.194	38.114	18.797	1.00	31.12	A
ATOM	777	CG	LEU A	99	55.950	38.211	17.469	1.00	35.44	A
ATOM	778	CD1	LEU A	99	56.650	39.577	17.416	1.00	35.45	A
ATOM	779	CD2	LEU A	99	56.970	37.087	17.341	1.00	35.62	A
ATOM	780	C	LEU A	99	54.135	36.932	20.689	1.00	27.10	A
ATOM	781	O	LEU A	99	53.201	37.616	21.097	1.00	25.34	A
ATOM	782	N	GLY A	100	54.935	36.233	21.492	1.00	26.71	A
ATOM	783	CA	GLY A	100	54.762	36.253	22.935	1.00	26.48	A
ATOM	784	C	GLY A	100	53.635	35.398	23.479	1.00	26.32	A
ATOM	785	O	GLY A	100	53.428	35.323	24.695	1.00	25.37	A
ATOM	786	N	GLN A	101	52.913	34.734	22.585	1.00	25.16	A
ATOM	787	CA	GLN A	101	51.796	33.896	22.999	1.00	25.74	A
ATOM	788	CB	GLN A	101	50.573	34.219	22.143	1.00	28.06	A
ATOM	789	CG	GLN A	101	49.258	33.911	22.814	1.00	30.50	A
ATOM	790	CD	GLN A	101	49.123	34.599	24.162	1.00	32.88	A
ATOM	791	OE1	GLN A	101	48.953	35.820	24.251	1.00	30.83	A
ATOM	792	NE2	GLN A	101	49.202	33.813	25.221	1.00	33.04	A
ATOM	793	C	GLN A	101	52.117	32.409	22.901	1.00	24.01	A
ATOM	794	O	GLN A	101	52.280	31.881	21.807	1.00	24.25	A
ATOM	795	N	PRO A	102	52.199	31.715	24.051	1.00	22.08	A
ATOM	796	CD	PRO A	102	51.959	32.244	25.410	1.00	22.41	A
ATOM	797	CA	PRO A	102	52.500	30.278	24.096	1.00	21.37	A
ATOM	798	CB	PRO A	102	52.136	29.898	25.526	1.00	21.61	A
ATOM	799	CG	PRO A	102	52.521	31.147	26.297	1.00	21.90	A
ATOM	800	C	PRO A	102	51.706	29.480	23.068	1.00	21.30	A
ATOM	801	O	PRO A	102	50.496	29.644	22.947	1.00	21.93	A
ATOM	802	N	ASN A	103	52.396	28.618	22.327	1.00	18.86	A
ATOM	803	CA	ASN A	103	51.749	27.802	21.305	1.00	17.69	A
ATOM	804	CB	ASN A	103	52.040	28.379	19.913	1.00	17.99	A
ATOM	805	CG	ASN A	103	50.899	28.162	18.929	1.00	18.28	A
ATOM	806	OD1	ASN A	103	50.348	27.060	18.808	1.00	17.82	A
ATOM	807	ND2	ASN A	103	50.549	29.223	18.204	1.00	17.71	A
ATOM	808	C	ASN A	103	52.281	26.370	21.385	1.00	15.57	A
ATOM	809	O	ASN A	103	53.000	26.012	22.310	1.00	14.67	A

ATOM	810	N	ILE	A	104	51.918	25.565	20.397	1.00	15.80	A
ATOM	811	CA	ILE	A	104	52.335	24.177	20.328	1.00	13.66	A
ATOM	812	CB	ILE	A	104	51.255	23.235	20.888	1.00	15.40	A
ATOM	813	CG2	ILE	A	104	51.589	21.792	20.539	1.00	13.82	A
ATOM	814	CG1	ILE	A	104	51.132	23.421	22.400	1.00	17.40	A
ATOM	815	CD1	ILE	A	104	50.129	22.494	23.047	1.00	18.65	A
ATOM	816	C	ILE	A	104	52.588	23.775	18.896	1.00	14.36	A
ATOM	817	O	ILE	A	104	51.716	23.924	18.052	1.00	16.86	A
ATOM	818	N	LEU	A	105	53.785	23.272	18.616	1.00	15.67	A
ATOM	819	CA	LEU	A	105	54.090	22.822	17.272	1.00	15.52	A
ATOM	820	CB	LEU	A	105	55.568	22.978	16.940	1.00	15.73	A
ATOM	821	CG	LEU	A	105	56.058	24.391	16.649	1.00	20.75	A
ATOM	822	CD1	LEU	A	105	57.400	24.298	15.919	1.00	20.19	A
ATOM	823	CD2	LEU	A	105	55.030	25.141	15.791	1.00	21.31	A
ATOM	824	C	LEU	A	105	53.709	21.362	17.202	1.00	15.97	A
ATOM	825	O	LEU	A	105	53.968	20.589	18.133	1.00	14.11	A
ATOM	826	N	ILE	A	106	53.078	20.993	16.099	1.00	14.18	A
ATOM	827	CA	ILE	A	106	52.643	19.630	15.903	1.00	15.40	A
ATOM	828	CB	ILE	A	106	51.122	19.576	15.636	1.00	15.11	A
ATOM	829	CG2	ILE	A	106	50.661	18.135	15.592	1.00	12.46	A
ATOM	830	CG1	ILE	A	106	50.380	20.354	16.734	1.00	15.51	A
ATOM	831	CD1	ILE	A	106	48.862	20.413	16.565	1.00	12.83	A
ATOM	832	C	ILE	A	106	53.381	19.011	14.725	1.00	16.48	A
ATOM	833	O	ILE	A	106	53.484	19.607	13.651	1.00	17.37	A
ATOM	834	N	CYS	A	107	53.900	17.811	14.944	1.00	17.86	A
ATOM	835	CA	CYS	A	107	54.621	17.083	13.917	1.00	18.32	A
ATOM	836	C	CYS	A	107	53.886	15.776	13.663	1.00	18.29	A
ATOM	837	O	CYS	A	107	53.846	14.909	14.533	1.00	18.13	A
ATOM	838	CB	CYS	A	107	56.041	16.792	14.382	1.00	19.33	A
ATOM	839	SG	CYS	A	107	57.029	15.889	13.158	1.00	25.82	A
ATOM	840	N	LEU	A	108	53.304	15.649	12.472	1.00	17.89	A
ATOM	841	CA	LEU	A	108	52.556	14.456	12.088	1.00	18.82	A
ATOM	842	CB	LEU	A	108	51.330	14.850	11.252	1.00	20.17	A
ATOM	843	CG	LEU	A	108	50.129	13.900	11.053	1.00	21.48	A
ATOM	844	CD1	LEU	A	108	49.623	14.049	9.624	1.00	20.62	A
ATOM	845	CD2	LEU	A	108	50.493	12.458	11.316	1.00	18.40	A
ATOM	846	C	LEU	A	108	53.445	13.538	11.252	1.00	19.49	A
ATOM	847	O	LEU	A	108	53.841	13.892	10.144	1.00	20.39	A
ATOM	848	N	VAL	A	109	53.760	12.368	11.789	1.00	18.45	A
ATOM	849	CA	VAL	A	109	54.586	11.398	11.087	1.00	19.04	A
ATOM	850	CB	VAL	A	109	55.665	10.805	12.042	1.00	18.71	A
ATOM	851	CG1	VAL	A	109	56.626	9.923	11.279	1.00	15.16	A
ATOM	852	CG2	VAL	A	109	56.431	11.949	12.729	1.00	17.68	A
ATOM	853	C	VAL	A	109	53.611	10.322	10.606	1.00	20.50	A
ATOM	854	O	VAL	A	109	53.115	9.516	11.393	1.00	21.55	A
ATOM	855	N	ASP	A	110	53.326	10.337	9.308	1.00	21.50	A
ATOM	856	CA	ASP	A	110	52.376	9.407	8.700	1.00	21.95	A
ATOM	857	CB	ASP	A	110	51.493	10.165	7.701	1.00	22.25	A
ATOM	858	CG	ASP	A	110	50.084	9.612	7.622	1.00	24.20	A
ATOM	859	OD1	ASP	A	110	49.874	8.435	7.989	1.00	23.87	A
ATOM	860	OD2	ASP	A	110	49.182	10.356	7.182	1.00	25.94	A
ATOM	861	C	ASP	A	110	53.059	8.240	7.985	1.00	21.53	A
ATOM	862	O	ASP	A	110	54.273	8.254	7.782	1.00	18.80	A
ATOM	863	N	ASN	A	111	52.254	7.245	7.603	1.00	23.78	A
ATOM	864	CA	ASN	A	111	52.706	6.037	6.900	1.00	23.32	A
ATOM	865	CB	ASN	A	111	53.046	6.360	5.437	1.00	24.67	A
ATOM	866	CG	ASN	A	111	53.181	5.102	4.575	1.00	31.76	A
ATOM	867	OD1	ASN	A	111	52.291	4.240	4.567	1.00	31.05	A
ATOM	868	ND2	ASN	A	111	54.292	4.994	3.842	1.00	29.09	A
ATOM	869	C	ASN	A	111	53.905	5.389	7.587	1.00	23.68	A
ATOM	870	O	ASN	A	111	54.953	5.156	6.976	1.00	22.88	A
ATOM	871	N	ILE	A	112	53.738	5.090	8.868	1.00	22.97	A
ATOM	872	CA	ILE	A	112	54.797	4.473	9.646	1.00	20.73	A
ATOM	873	CB	ILE	A	112	54.791	4.967	11.108	1.00	20.13	A
ATOM	874	CG2	ILE	A	112	55.979	4.363	11.864	1.00	15.53	A
ATOM	875	CG1	ILE	A	112	54.833	6.495	11.158	1.00	19.14	A
ATOM	876	CD1	ILE	A	112	54.671	7.058	12.575	1.00	20.42	A
ATOM	877	C	ILE	A	112	54.658	2.960	9.699	1.00	22.54	A
ATOM	878	O	ILE	A	112	53.605	2.436	10.054	1.00	22.65	A
ATOM	879	N	PHE	A	113	55.732	2.266	9.343	1.00	21.37	A
ATOM	880	CA	PHE	A	113	55.769	0.819	9.412	1.00	21.74	A
ATOM	881	CB	PHE	A	113	54.742	0.167	8.483	1.00	21.64	A
ATOM	882	CG	PHE	A	113	54.451	-1.252	8.850	1.00	21.22	A
ATOM	883	CD1	PHE	A	113	53.528	-1.543	9.856	1.00	20.25	A

ATOM	884	CD2	PHE	A	113	55.183	-2.296	8.285	1.00	20.76	A
ATOM	885	CE1	PHE	A	113	53.341	-2.848	10.302	1.00	19.85	A
ATOM	886	CE2	PHE	A	113	55.008	-3.607	8.721	1.00	20.75	A
ATOM	887	CZ	PHE	A	113	54.086	-3.887	9.735	1.00	21.24	A
ATOM	888	C	PHE	A	113	57.157	0.329	9.042	1.00	21.21	A
ATOM	889	O	PHE	A	113	57.700	0.719	8.011	1.00	19.97	A
ATOM	890	N	PRO	A	114	57.765	-0.509	9.893	1.00	22.22	A
ATOM	891	CD	PRO	A	114	59.118	-1.018	9.614	1.00	22.88	A
ATOM	892	CA	PRO	A	114	57.263	-1.040	11.170	1.00	23.38	A
ATOM	893	CB	PRO	A	114	58.340	-2.045	11.571	1.00	23.68	A
ATOM	894	CG	PRO	A	114	59.592	-1.435	10.984	1.00	23.26	A
ATOM	895	C	PRO	A	114	57.078	0.059	12.221	1.00	24.33	A
ATOM	896	O	PRO	A	114	57.571	1.174	12.054	1.00	24.35	A
ATOM	897	N	PRO	A	115	56.363	-0.247	13.319	1.00	24.59	A
ATOM	898	CD	PRO	A	115	55.579	-1.472	13.567	1.00	22.60	A
ATOM	899	CA	PRO	A	115	56.135	0.751	14.372	1.00	23.79	A
ATOM	900	CB	PRO	A	115	54.923	0.194	15.107	1.00	23.96	A
ATOM	901	CG	PRO	A	115	55.129	-1.291	14.998	1.00	23.45	A
ATOM	902	C	PRO	A	115	57.337	0.996	15.289	1.00	24.97	A
ATOM	903	O	PRO	A	115	57.322	0.670	16.482	1.00	23.11	A
ATOM	904	N	VAL	A	116	58.380	1.573	14.705	1.00	24.77	A
ATOM	905	CA	VAL	A	116	59.607	1.902	15.423	1.00	24.05	A
ATOM	906	CB	VAL	A	116	60.733	0.881	15.135	1.00	26.45	A
ATOM	907	CG1	VAL	A	116	61.977	1.250	15.933	1.00	24.89	A
ATOM	908	CG2	VAL	A	116	60.267	-0.539	15.470	1.00	26.43	A
ATOM	909	C	VAL	A	116	60.043	3.254	14.875	1.00	24.47	A
ATOM	910	O	VAL	A	116	60.340	3.381	13.684	1.00	23.94	A
ATOM	911	N	VAL	A	117	60.088	4.269	15.728	1.00	22.43	A
ATOM	912	CA	VAL	A	117	60.472	5.577	15.239	1.00	22.18	A
ATOM	913	CB	VAL	A	117	59.247	6.277	14.565	1.00	21.24	A
ATOM	914	CG1	VAL	A	117	58.276	6.807	15.631	1.00	17.87	A
ATOM	915	CG2	VAL	A	117	59.710	7.387	13.653	1.00	19.98	A
ATOM	916	C	VAL	A	117	61.035	6.484	16.326	1.00	23.40	A
ATOM	917	O	VAL	A	117	60.743	6.323	17.512	1.00	22.77	A
ATOM	918	N	ASN	A	118	61.868	7.427	15.909	1.00	24.87	A
ATOM	919	CA	ASN	A	118	62.434	8.398	16.833	1.00	25.96	A
ATOM	920	CB	ASN	A	118	63.970	8.341	16.858	1.00	29.36	A
ATOM	921	CG	ASN	A	118	64.506	7.213	17.728	1.00	31.24	A
ATOM	922	OD1	ASN	A	118	63.885	6.833	18.722	1.00	34.20	A
ATOM	923	ND2	ASN	A	118	65.679	6.694	17.374	1.00	34.04	A
ATOM	924	C	ASN	A	118	61.989	9.746	16.312	1.00	24.87	A
ATOM	925	O	ASN	A	118	62.298	10.112	15.177	1.00	26.17	A
ATOM	926	N	ILE	A	119	61.229	10.468	17.122	1.00	23.82	A
ATOM	927	CA	ILE	A	119	60.774	11.793	16.727	1.00	23.07	A
ATOM	928	CB	ILE	A	119	59.231	11.892	16.711	1.00	22.65	A
ATOM	929	CG2	ILE	A	119	58.797	13.197	16.051	1.00	18.01	A
ATOM	930	CG1	ILE	A	119	58.642	10.716	15.936	1.00	21.02	A
ATOM	931	CD1	ILE	A	119	57.135	10.714	15.921	1.00	21.88	A
ATOM	932	C	ILE	A	119	61.323	12.771	17.754	1.00	22.76	A
ATOM	933	O	ILE	A	119	61.013	12.680	18.940	1.00	22.92	A
ATOM	934	N	THR	A	120	62.162	13.691	17.303	1.00	23.11	A
ATOM	935	CA	THR	A	120	62.737	14.673	18.205	1.00	23.65	A
ATOM	936	CB	THR	A	120	64.216	14.363	18.495	1.00	25.23	A
ATOM	937	OG1	THR	A	120	64.921	14.199	17.258	1.00	26.55	A
ATOM	938	CG2	THR	A	120	64.335	13.081	19.331	1.00	23.93	A
ATOM	939	C	THR	A	120	62.622	16.064	17.616	1.00	23.20	A
ATOM	940	O	THR	A	120	62.437	16.232	16.412	1.00	23.15	A
ATOM	941	N	TRP	A	121	62.725	17.069	18.470	1.00	22.54	A
ATOM	942	CA	TRP	A	121	62.619	18.432	17.998	1.00	21.37	A
ATOM	943	CB	TRP	A	121	61.563	19.196	18.791	1.00	19.43	A
ATOM	944	CG	TRP	A	121	60.173	18.679	18.616	1.00	18.76	A
ATOM	945	CD2	TRP	A	121	59.191	19.179	17.703	1.00	19.96	A
ATOM	946	CE2	TRP	A	121	58.002	18.454	17.931	1.00	18.06	A
ATOM	947	CE3	TRP	A	121	59.200	20.178	16.715	1.00	16.07	A
ATOM	948	CD1	TRP	A	121	59.567	17.694	19.330	1.00	18.18	A
ATOM	949	NE1	TRP	A	121	58.261	17.553	18.929	1.00	19.21	A
ATOM	950	CZ2	TRP	A	121	56.827	18.694	17.210	1.00	16.20	A
ATOM	951	CZ3	TRP	A	121	58.036	20.419	16.000	1.00	16.43	A
ATOM	952	CH2	TRP	A	121	56.864	19.679	16.252	1.00	17.37	A
ATOM	953	C	TRP	A	121	63.927	19.178	18.097	1.00	22.88	A
ATOM	954	O	TRP	A	121	64.743	18.937	18.992	1.00	22.75	A
ATOM	955	N	LEU	A	122	64.109	20.100	17.164	1.00	23.24	A
ATOM	956	CA	LEU	A	122	65.291	20.930	17.136	1.00	22.66	A
ATOM	957	CB	LEU	A	122	66.094	20.699	15.850	1.00	23.05	A

ATOM	958	CG	LEU A 122	66.638	19.293	15.563	1.00 22.23	A
ATOM	959	CD1	LEU A 122	67.404	19.326	14.253	1.00 20.93	A
ATOM	960	CD2	LEU A 122	67.542	18.830	16.700	1.00 20.21	A
ATOM	961	C	LEU A 122	64.837	22.376	17.186	1.00 23.52	A
ATOM	962	O	LEU A 122	63.830	22.752	16.572	1.00 21.74	A
ATOM	963	N	SER A 123	65.579	23.174	17.945	1.00 23.69	A
ATOM	964	CA	SER A 123	65.330	24.597	18.063	1.00 24.10	A
ATOM	965	CB	SER A 123	64.998	24.983	19.504	1.00 25.22	A
ATOM	966	OG	SER A 123	64.735	26.373	19.591	1.00 25.55	A
ATOM	967	C	SER A 123	66.664	25.200	17.650	1.00 24.79	A
ATOM	968	O	SER A 123	67.670	25.014	18.335	1.00 23.07	A
ATOM	969	N	ASN A 124	66.666	25.903	16.521	1.00 25.02	A
ATOM	970	CA	ASN A 124	67.880	26.513	15.986	1.00 25.63	A
ATOM	971	CB	ASN A 124	68.351	27.676	16.868	1.00 24.46	A
ATOM	972	CG	ASN A 124	67.376	28.839	16.873	1.00 25.33	A
ATOM	973	OD1	ASN A 124	66.636	29.056	15.907	1.00 26.04	A
ATOM	974	ND2	ASN A 124	67.381	29.606	17.956	1.00 21.77	A
ATOM	975	C	ASN A 124	69.006	25.487	15.838	1.00 26.53	A
ATOM	976	O	ASN A 124	70.132	25.706	16.301	1.00 26.36	A
ATOM	977	N	GLY A 125	68.684	24.361	15.205	1.00 24.78	A
ATOM	978	CA	GLY A 125	69.669	23.326	14.964	1.00 26.09	A
ATOM	979	C	GLY A 125	70.030	22.377	16.089	1.00 27.35	A
ATOM	980	O	GLY A 125	70.728	21.395	15.846	1.00 28.21	A
ATOM	981	N	HIS A 126	69.566	22.645	17.307	1.00 28.65	A
ATOM	982	CA	HIS A 126	69.889	21.774	18.430	1.00 30.12	A
ATOM	983	CB	HIS A 126	70.816	22.507	19.408	1.00 32.68	A
ATOM	984	CG	HIS A 126	70.226	23.750	19.996	1.00 35.25	A
ATOM	985	CD2	HIS A 126	70.296	25.044	19.601	1.00 36.90	A
ATOM	986	ND1	HIS A 126	69.475	23.743	21.151	1.00 35.93	A
ATOM	987	CE1	HIS A 126	69.110	24.979	21.445	1.00 36.88	A
ATOM	988	NE2	HIS A 126	69.595	25.788	20.520	1.00 36.73	A
ATOM	989	C	HIS A 126	68.661	21.220	19.149	1.00 30.87	A
ATOM	990	O	HIS A 126	67.634	21.889	19.270	1.00 31.49	A
ATOM	991	N	SER A 127	68.789	19.990	19.635	1.00 30.93	A
ATOM	992	CA	SER A 127	67.697	19.286	20.302	1.00 33.08	A
ATOM	993	CB	SER A 127	68.165	17.889	20.714	1.00 33.91	A
ATOM	994	OG	SER A 127	69.231	17.979	21.645	1.00 38.34	A
ATOM	995	C	SER A 127	67.050	19.971	21.501	1.00 32.98	A
ATOM	996	O	SER A 127	67.708	20.654	22.288	1.00 34.83	A
ATOM	997	N	VAL A 128	65.743	19.770	21.624	1.00 32.42	A
ATOM	998	CA	VAL A 128	64.960	20.325	22.716	1.00 31.29	A
ATOM	999	CB	VAL A 128	63.645	20.921	22.202	1.00 30.48	A
ATOM	1000	CG1	VAL A 128	62.856	21.520	23.358	1.00 27.06	A
ATOM	1001	CG2	VAL A 128	63.937	21.970	21.142	1.00 28.52	A
ATOM	1002	C	VAL A 128	64.645	19.183	23.669	1.00 32.28	A
ATOM	1003	O	VAL A 128	64.275	18.093	23.237	1.00 32.80	A
ATOM	1004	N	THR A 129	64.786	19.437	24.965	1.00 33.30	A
ATOM	1005	CA	THR A 129	64.546	18.411	25.981	1.00 33.70	A
ATOM	1006	CB	THR A 129	65.740	18.344	26.966	1.00 34.52	A
ATOM	1007	OG1	THR A 129	65.969	19.643	27.528	1.00 38.18	A
ATOM	1008	CG2	THR A 129	67.006	17.898	26.245	1.00 34.60	A
ATOM	1009	C	THR A 129	63.257	18.591	26.791	1.00 32.08	A
ATOM	1010	O	THR A 129	62.645	17.615	27.220	1.00 34.04	A
ATOM	1011	N	GLU A 130	62.843	19.835	26.993	1.00 28.85	A
ATOM	1012	CA	GLU A 130	61.639	20.119	27.762	1.00 26.09	A
ATOM	1013	CB	GLU A 130	61.926	21.236	28.770	1.00 28.58	A
ATOM	1014	CG	GLU A 130	62.962	20.894	29.822	1.00 32.87	A
ATOM	1015	CD	GLU A 130	62.592	19.654	30.609	1.00 35.34	A
ATOM	1016	OE1	GLU A 130	61.392	19.475	30.907	1.00 37.85	A
ATOM	1017	OE2	GLU A 130	63.501	18.865	30.941	1.00 36.29	A
ATOM	1018	C	GLU A 130	60.451	20.534	26.893	1.00 23.53	A
ATOM	1019	O	GLU A 130	60.629	21.166	25.859	1.00 19.76	A
ATOM	1020	N	GLY A 131	59.243	20.188	27.334	1.00 21.13	A
ATOM	1021	CA	GLY A 131	58.046	20.563	26.601	1.00 20.14	A
ATOM	1022	C	GLY A 131	57.693	19.684	25.421	1.00 20.64	A
ATOM	1023	O	GLY A 131	56.989	20.109	24.507	1.00 20.11	A
ATOM	1024	N	VAL A 132	58.164	18.447	25.444	1.00 18.28	A
ATOM	1025	CA	VAL A 132	57.899	17.527	24.355	1.00 20.08	A
ATOM	1026	CB	VAL A 132	59.230	16.985	23.767	1.00 20.35	A
ATOM	1027	CG1	VAL A 132	58.946	15.874	22.772	1.00 22.11	A
ATOM	1028	CG2	VAL A 132	60.006	18.114	23.093	1.00 20.17	A
ATOM	1029	C	VAL A 132	57.027	16.340	24.786	1.00 20.06	A
ATOM	1030	O	VAL A 132	57.194	15.794	25.875	1.00 18.65	A
ATOM	1031	N	SER A 133	56.094	15.948	23.925	1.00 17.90	A

ATOM	1032	CA	SER	A	133	55.238	14.802	24.215	1.00	18.16	A
ATOM	1033	CB	SER	A	133	54.045	15.206	25.094	1.00	18.24	A
ATOM	1034	OG	SER	A	133	53.202	16.143	24.440	1.00	24.24	A
ATOM	1035	C	SER	A	133	54.738	14.200	22.914	1.00	16.52	A
ATOM	1036	O	SER	A	133	54.876	14.794	21.843	1.00	16.18	A
ATOM	1037	N	GLU	A	134	54.166	13.009	22.996	1.00	17.45	A
ATOM	1038	CA	GLU	A	134	53.653	12.369	21.800	1.00	18.50	A
ATOM	1039	CB	GLU	A	134	54.797	11.661	21.050	1.00	22.31	A
ATOM	1040	CG	GLU	A	134	55.475	10.513	21.801	1.00	24.62	A
ATOM	1041	CD	GLU	A	134	56.610	9.859	20.992	1.00	28.65	A
ATOM	1042	OE1	GLU	A	134	56.932	8.680	21.254	1.00	29.58	A
ATOM	1043	OE2	GLU	A	134	57.188	10.521	20.099	1.00	27.96	A
ATOM	1044	C	GLU	A	134	52.523	11.389	22.087	1.00	18.44	A
ATOM	1045	O	GLU	A	134	52.279	11.003	23.234	1.00	17.30	A
ATOM	1046	N	THR	A	135	51.824	11.008	21.027	1.00	16.71	A
ATOM	1047	CA	THR	A	135	50.733	10.059	21.119	1.00	15.49	A
ATOM	1048	CB	THR	A	135	49.738	10.246	19.967	1.00	16.16	A
ATOM	1049	OG1	THR	A	135	50.369	9.867	18.731	1.00	16.02	A
ATOM	1050	CG2	THR	A	135	49.280	11.697	19.879	1.00	14.19	A
ATOM	1051	C	THR	A	135	51.346	8.682	20.946	1.00	17.19	A
ATOM	1052	O	THR	A	135	52.551	8.554	20.733	1.00	17.26	A
ATOM	1053	N	SER	A	136	50.519	7.650	21.047	1.00	17.53	A
ATOM	1054	CA	SER	A	136	51.001	6.297	20.818	1.00	15.92	A
ATOM	1055	CB	SER	A	136	50.035	5.266	21.416	1.00	16.85	A
ATOM	1056	OG	SER	A	136	49.756	5.532	22.781	1.00	18.22	A
ATOM	1057	C	SER	A	136	50.967	6.187	19.294	1.00	15.84	A
ATOM	1058	O	SER	A	136	50.715	7.169	18.596	1.00	17.25	A
ATOM	1059	N	PHE	A	137	51.236	5.003	18.767	1.00	17.08	A
ATOM	1060	CA	PHE	A	137	51.155	4.806	17.333	1.00	15.67	A
ATOM	1061	CB	PHE	A	137	51.874	3.519	16.936	1.00	13.47	A
ATOM	1062	CG	PHE	A	137	53.363	3.628	16.951	1.00	14.48	A
ATOM	1063	CD1	PHE	A	137	54.037	4.255	15.907	1.00	15.82	A
ATOM	1064	CD2	PHE	A	137	54.100	3.112	18.010	1.00	15.21	A
ATOM	1065	CE1	PHE	A	137	55.427	4.367	15.918	1.00	15.72	A
ATOM	1066	CE2	PHE	A	137	55.490	3.220	18.031	1.00	15.14	A
ATOM	1067	CZ	PHE	A	137	56.152	3.848	16.983	1.00	14.35	A
ATOM	1068	C	PHE	A	137	49.659	4.657	17.067	1.00	16.21	A
ATOM	1069	O	PHE	A	137	49.037	3.767	17.622	1.00	18.05	A
ATOM	1070	N	LEU	A	138	49.074	5.534	16.259	1.00	17.51	A
ATOM	1071	CA	LEU	A	138	47.648	5.433	15.953	1.00	19.20	A
ATOM	1072	CB	LEU	A	138	47.017	6.822	15.800	1.00	20.80	A
ATOM	1073	CG	LEU	A	138	46.809	7.688	17.044	1.00	23.47	A
ATOM	1074	CD1	LEU	A	138	46.141	6.879	18.144	1.00	24.75	A
ATOM	1075	CD2	LEU	A	138	48.140	8.212	17.529	1.00	27.62	A
ATOM	1076	C	LEU	A	138	47.490	4.637	14.658	1.00	18.41	A
ATOM	1077	O	LEU	A	138	48.218	4.862	13.698	1.00	16.16	A
ATOM	1078	N	SER	A	139	46.530	3.716	14.630	1.00	18.51	A
ATOM	1079	CA	SER	A	139	46.333	2.863	13.460	1.00	17.61	A
ATOM	1080	CB	SER	A	139	45.481	1.656	13.836	1.00	18.17	A
ATOM	1081	OG	SER	A	139	44.134	2.036	14.040	1.00	20.80	A
ATOM	1082	C	SER	A	139	45.729	3.510	12.216	1.00	17.44	A
ATOM	1083	O	SER	A	139	45.122	4.578	12.276	1.00	16.41	A
ATOM	1084	N	LYS	A	140	45.908	2.822	11.088	1.00	18.56	A
ATOM	1085	CA	LYS	A	140	45.402	3.237	9.778	1.00	18.37	A
ATOM	1086	CB	LYS	A	140	46.543	3.751	8.895	1.00	21.60	A
ATOM	1087	CG	LYS	A	140	47.149	5.085	9.326	1.00	24.86	A
ATOM	1088	CD	LYS	A	140	46.513	6.267	8.602	1.00	30.27	A
ATOM	1089	CE	LYS	A	140	46.961	6.345	7.150	1.00	29.93	A
ATOM	1090	NZ	LYS	A	140	48.440	6.349	7.038	1.00	30.14	A
ATOM	1091	C	LYS	A	140	44.773	2.012	9.118	1.00	17.79	A
ATOM	1092	O	LYS	A	140	45.106	0.878	9.458	1.00	17.76	A
ATOM	1093	N	SER	A	141	43.882	2.234	8.160	1.00	18.54	A
ATOM	1094	CA	SER	A	141	43.220	1.124	7.481	1.00	21.55	A
ATOM	1095	CB	SER	A	141	42.047	1.634	6.630	1.00	21.05	A
ATOM	1096	OG	SER	A	141	42.490	2.482	5.588	1.00	28.41	A
ATOM	1097	C	SER	A	141	44.154	0.263	6.625	1.00	21.42	A
ATOM	1098	O	SER	A	141	43.828	-0.885	6.332	1.00	21.49	A
ATOM	1099	N	ASP	A	142	45.311	0.793	6.226	1.00	20.12	A
ATOM	1100	CA	ASP	A	142	46.234	-0.016	5.430	1.00	19.88	A
ATOM	1101	CB	ASP	A	142	47.008	0.843	4.420	1.00	22.82	A
ATOM	1102	CG	ASP	A	142	47.949	1.834	5.076	1.00	24.81	A
ATOM	1103	OD1	ASP	A	142	47.837	2.061	6.298	1.00	25.33	A
ATOM	1104	OD2	ASP	A	142	48.799	2.395	4.354	1.00	28.43	A
ATOM	1105	C	ASP	A	142	47.176	-0.752	6.368	1.00	20.11	A

ATOM	1106	O	ASP A 142	48.127	-1.416	5.946	1.00	19.21	A
ATOM	1107	N	HIS A 143	46.885	-0.626	7.659	1.00	18.99	A
ATOM	1108	CA	HIS A 143	47.637	-1.295	8.706	1.00	17.27	A
ATOM	1109	CB	HIS A 143	47.686	-2.792	8.409	1.00	16.45	A
ATOM	1110	CG	HIS A 143	46.329	-3.396	8.190	1.00	18.33	A
ATOM	1111	CD2	HIS A 143	45.860	-4.211	7.213	1.00	17.59	A
ATOM	1112	ND1	HIS A 143	45.262	-3.151	9.032	1.00	15.97	A
ATOM	1113	CE1	HIS A 143	44.194	-3.786	8.580	1.00	19.46	A
ATOM	1114	NE2	HIS A 143	44.529	-4.436	7.478	1.00	18.06	A
ATOM	1115	C	HIS A 143	49.019	-0.749	9.030	1.00	19.46	A
ATOM	1116	O	HIS A 143	49.812	-1.401	9.715	1.00	19.95	A
ATOM	1117	N	SER A 144	49.301	0.454	8.536	1.00	19.70	A
ATOM	1118	CA	SER A 144	50.542	1.141	8.852	1.00	20.18	A
ATOM	1119	CB	SER A 144	51.018	2.011	7.678	1.00	19.91	A
ATOM	1120	OG	SER A 144	50.099	3.044	7.364	1.00	23.64	A
ATOM	1121	C	SER A 144	50.109	2.018	10.034	1.00	19.40	A
ATOM	1122	O	SER A 144	48.970	1.906	10.499	1.00	19.70	A
ATOM	1123	N	PHE A 145	50.986	2.883	10.525	1.00	16.99	A
ATOM	1124	CA	PHE A 145	50.614	3.728	11.649	1.00	16.06	A
ATOM	1125	CB	PHE A 145	51.325	3.274	12.929	1.00	16.25	A
ATOM	1126	CG	PHE A 145	51.062	1.841	13.297	1.00	19.53	A
ATOM	1127	CD1	PHE A 145	51.754	0.807	12.672	1.00	20.17	A
ATOM	1128	CD2	PHE A 145	50.114	1.522	14.263	1.00	18.18	A
ATOM	1129	CE1	PHE A 145	51.505	-0.525	13.005	1.00	21.33	A
ATOM	1130	CE2	PHE A 145	49.856	0.193	14.606	1.00	19.50	A
ATOM	1131	CZ	PHE A 145	50.553	-0.831	13.975	1.00	20.23	A
ATOM	1132	C	PHE A 145	50.955	5.182	11.419	1.00	15.69	A
ATOM	1133	O	PHE A 145	51.548	5.538	10.404	1.00	16.69	A
ATOM	1134	N	PHE A 146	50.530	6.021	12.357	1.00	14.53	A
ATOM	1135	CA	PHE A 146	50.869	7.429	12.332	1.00	16.67	A
ATOM	1136	CB	PHE A 146	49.841	8.279	11.552	1.00	16.59	A
ATOM	1137	CG	PHE A 146	48.535	8.528	12.259	1.00	15.25	A
ATOM	1138	CD1	PHE A 146	48.370	9.644	13.071	1.00	15.42	A
ATOM	1139	CD2	PHE A 146	47.433	7.708	12.019	1.00	16.06	A
ATOM	1140	CE1	PHE A 146	47.123	9.952	13.629	1.00	17.50	A
ATOM	1141	CE2	PHE A 146	46.180	8.003	12.571	1.00	16.80	A
ATOM	1142	CZ	PHE A 146	46.023	9.126	13.375	1.00	17.47	A
ATOM	1143	C	PHE A 146	51.017	7.841	13.783	1.00	17.00	A
ATOM	1144	O	PHE A 146	50.345	7.308	14.661	1.00	19.50	A
ATOM	1145	N	LYS A 147	51.950	8.747	14.032	1.00	17.82	A
ATOM	1146	CA	LYS A 147	52.224	9.221	15.377	1.00	18.67	A
ATOM	1147	CB	LYS A 147	53.540	8.604	15.863	1.00	20.48	A
ATOM	1148	CG	LYS A 147	53.771	8.668	17.359	1.00	25.54	A
ATOM	1149	CD	LYS A 147	54.822	7.645	17.774	1.00	29.96	A
ATOM	1150	CE	LYS A 147	54.835	7.417	19.282	1.00	30.05	A
ATOM	1151	NZ	LYS A 147	55.740	6.291	19.643	1.00	33.05	A
ATOM	1152	C	LYS A 147	52.315	10.743	15.338	1.00	17.25	A
ATOM	1153	O	LYS A 147	52.716	11.320	14.329	1.00	19.15	A
ATOM	1154	N	ILE A 148	51.932	11.391	16.428	1.00	15.47	A
ATOM	1155	CA	ILE A 148	51.969	12.846	16.494	1.00	14.99	A
ATOM	1156	CB	ILE A 148	50.529	13.424	16.642	1.00	15.37	A
ATOM	1157	CG2	ILE A 148	50.566	14.932	16.740	1.00	14.06	A
ATOM	1158	CG1	ILE A 148	49.689	13.025	15.426	1.00	16.41	A
ATOM	1159	CD1	ILE A 148	48.223	13.325	15.550	1.00	18.61	A
ATOM	1160	C	ILE A 148	52.829	13.271	17.682	1.00	17.07	A
ATOM	1161	O	ILE A 148	52.721	12.702	18.772	1.00	15.61	A
ATOM	1162	N	SER A 149	53.696	14.255	17.458	1.00	16.79	A
ATOM	1163	CA	SER A 149	54.570	14.757	18.514	1.00	17.66	A
ATOM	1164	CB	SER A 149	56.042	14.612	18.116	1.00	15.95	A
ATOM	1165	OG	SER A 149	56.900	14.956	19.190	1.00	17.31	A
ATOM	1166	C	SER A 149	54.239	16.225	18.763	1.00	18.34	A
ATOM	1167	O	SER A 149	53.854	16.949	17.842	1.00	18.33	A
ATOM	1168	N	TYR A 150	54.401	16.665	20.005	1.00	16.95	A
ATOM	1169	CA	TYR A 150	54.085	18.040	20.362	1.00	17.59	A
ATOM	1170	CB	TYR A 150	52.893	18.057	21.310	1.00	17.57	A
ATOM	1171	CG	TYR A 150	51.679	17.314	20.797	1.00	18.52	A
ATOM	1172	CD1	TYR A 150	50.879	17.851	19.789	1.00	17.12	A
ATOM	1173	CE1	TYR A 150	49.733	17.182	19.340	1.00	18.32	A
ATOM	1174	CD2	TYR A 150	51.313	16.078	21.345	1.00	18.89	A
ATOM	1175	CE2	TYR A 150	50.176	15.399	20.901	1.00	17.65	A
ATOM	1176	CZ	TYR A 150	49.391	15.957	19.900	1.00	17.92	A
ATOM	1177	OH	TYR A 150	48.275	15.285	19.457	1.00	19.69	A
ATOM	1178	C	TYR A 150	55.237	18.768	21.021	1.00	17.16	A
ATOM	1179	O	TYR A 150	55.953	18.207	21.847	1.00	19.65	A

ATOM	1180	N	LEU A 151	55.409	20.029	20.649	1.00 17.01	A
ATOM	1181	CA	LEU A 151	56.449	20.868	21.224	1.00 15.24	A
ATOM	1182	CB	LEU A 151	57.540	21.182	20.197	1.00 16.33	A
ATOM	1183	CG	LEU A 151	58.487	22.335	20.575	1.00 16.27	A
ATOM	1184	CD1	LEU A 151	59.402	21.906	21.706	1.00 17.13	A
ATOM	1185	CD2	LEU A 151	59.315	22.755	19.359	1.00 19.34	A
ATOM	1186	C	LEU A 151	55.825	22.174	21.666	1.00 16.08	A
ATOM	1187	O	LEU A 151	55.221	22.881	20.860	1.00 16.22	A
ATOM	1188	N	THR A 152	55.952	22.497	22.945	1.00 16.84	A
ATOM	1189	CA	THR A 152	55.428	23.765	23.424	1.00 18.70	A
ATOM	1190	CB	THR A 152	55.283	23.799	24.946	1.00 20.14	A
ATOM	1191	OG1	THR A 152	56.576	23.633	25.544	1.00 23.32	A
ATOM	1192	CG2	THR A 152	54.355	22.694	25.419	1.00 18.36	A
ATOM	1193	C	THR A 152	56.498	24.772	23.050	1.00 20.04	A
ATOM	1194	O	THR A 152	57.689	24.448	23.034	1.00 20.72	A
ATOM	1195	N	LEU A 153	56.085	25.986	22.735	1.00 20.63	A
ATOM	1196	CA	LEU A 153	57.043	27.014	22.389	1.00 24.69	A
ATOM	1197	CB	LEU A 153	57.579	26.794	20.960	1.00 24.19	A
ATOM	1198	CG	LEU A 153	56.716	26.942	19.694	1.00 26.72	A
ATOM	1199	CD1	LEU A 153	55.303	26.451	19.959	1.00 27.32	A
ATOM	1200	CD2	LEU A 153	56.686	28.393	19.249	1.00 26.15	A
ATOM	1201	C	LEU A 153	56.410	28.385	22.531	1.00 26.36	A
ATOM	1202	O	LEU A 153	55.180	28.511	22.597	1.00 29.59	A
ATOM	1203	N	LEU A 154	57.262	29.401	22.620	1.00 26.29	A
ATOM	1204	CA	LEU A 154	56.830	30.787	22.729	1.00 26.89	A
ATOM	1205	CB	LEU A 154	57.459	31.444	23.965	1.00 26.94	A
ATOM	1206	CG	LEU A 154	56.966	32.833	24.407	1.00 28.58	A
ATOM	1207	CD1	LEU A 154	55.507	32.755	24.864	1.00 24.43	A
ATOM	1208	CD2	LEU A 154	57.845	33.342	25.549	1.00 27.14	A
ATOM	1209	C	LEU A 154	57.337	31.458	21.456	1.00 28.94	A
ATOM	1210	O	LEU A 154	58.538	31.689	21.304	1.00 30.73	A
ATOM	1211	N	PRO A 155	56.428	31.773	20.518	1.00 30.57	A
ATOM	1212	CD	PRO A 155	54.975	31.534	20.559	1.00 29.60	A
ATOM	1213	CA	PRO A 155	56.806	32.412	19.254	1.00 31.63	A
ATOM	1214	CB	PRO A 155	55.460	32.668	18.581	1.00 30.63	A
ATOM	1215	CG	PRO A 155	54.612	31.552	19.087	1.00 28.73	A
ATOM	1216	C	PRO A 155	57.639	33.688	19.370	1.00 33.58	A
ATOM	1217	O	PRO A 155	57.322	34.593	20.136	1.00 33.98	A
ATOM	1218	N	SER A 156	58.706	33.741	18.586	1.00 35.79	A
ATOM	1219	CA	SER A 156	59.595	34.888	18.546	1.00 37.77	A
ATOM	1220	CB	SER A 156	60.604	34.839	19.694	1.00 38.66	A
ATOM	1221	OG	SER A 156	59.955	34.966	20.949	1.00 44.00	A
ATOM	1222	C	SER A 156	60.332	34.841	17.222	1.00 38.83	A
ATOM	1223	O	SER A 156	60.257	33.849	16.492	1.00 38.36	A
ATOM	1224	N	ALA A 157	61.042	35.915	16.909	1.00 40.38	A
ATOM	1225	CA	ALA A 157	61.796	35.972	15.670	1.00 39.93	A
ATOM	1226	CB	ALA A 157	61.822	37.401	15.148	1.00 40.36	A
ATOM	1227	C	ALA A 157	63.214	35.466	15.918	1.00 39.65	A
ATOM	1228	O	ALA A 157	64.058	35.504	15.021	1.00 39.72	A
ATOM	1229	N	GLU A 158	63.463	34.984	17.135	1.00 39.12	A
ATOM	1230	CA	GLU A 158	64.784	34.480	17.517	1.00 40.24	A
ATOM	1231	CB	GLU A 158	65.082	34.808	18.988	1.00 44.21	A
ATOM	1232	CG	GLU A 158	65.426	36.268	19.287	1.00 50.31	A
ATOM	1233	CD	GLU A 158	64.204	37.174	19.356	1.00 55.36	A
ATOM	1234	OE1	GLU A 158	64.353	38.351	19.765	1.00 55.75	A
ATOM	1235	OE2	GLU A 158	63.095	36.712	19.002	1.00 58.12	A
ATOM	1236	C	GLU A 158	65.005	32.979	17.303	1.00 38.02	A
ATOM	1237	O	GLU A 158	66.130	32.493	17.419	1.00 36.30	A
ATOM	1238	N	GLU A 159	63.950	32.234	17.002	1.00 35.79	A
ATOM	1239	CA	GLU A 159	64.136	30.807	16.805	1.00 35.02	A
ATOM	1240	CB	GLU A 159	63.949	30.066	18.135	1.00 36.97	A
ATOM	1241	CG	GLU A 159	62.699	30.439	18.891	1.00 41.68	A
ATOM	1242	CD	GLU A 159	62.717	29.933	20.323	1.00 44.82	A
ATOM	1243	OE1	GLU A 159	62.819	28.705	20.527	1.00 46.62	A
ATOM	1244	OE2	GLU A 159	62.631	30.767	21.248	1.00 47.25	A
ATOM	1245	C	GLU A 159	63.277	30.162	15.735	1.00 32.21	A
ATOM	1246	O	GLU A 159	62.147	30.574	15.473	1.00 32.05	A
ATOM	1247	N	SER A 160	63.849	29.147	15.107	1.00 29.55	A
ATOM	1248	CA	SER A 160	63.167	28.394	14.076	1.00 28.89	A
ATOM	1249	CB	SER A 160	63.885	28.551	12.734	1.00 27.34	A
ATOM	1250	OG	SER A 160	65.206	28.053	12.807	1.00 29.49	A
ATOM	1251	C	SER A 160	63.241	26.957	14.565	1.00 27.42	A
ATOM	1252	O	SER A 160	64.092	26.628	15.392	1.00 25.45	A
ATOM	1253	N	TYR A 161	62.359	26.101	14.066	1.00 24.73	A

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ATOM	1254	CA	TYR A 161	62.359	24.725	14.517	1.00	24.26	A
ATOM	1255	CB	TYR A 161	61.172	24.480	15.451	1.00	23.50	A
ATOM	1256	CG	TYR A 161	60.935	25.593	16.434	1.00	24.01	A
ATOM	1257	CD1	TYR A 161	60.255	26.748	16.052	1.00	26.02	A
ATOM	1258	CE1	TYR A 161	60.009	27.774	16.959	1.00	27.93	A
ATOM	1259	CD2	TYR A 161	61.374	25.491	17.753	1.00	24.78	A
ATOM	1260	CE2	TYR A 161	61.136	26.514	18.674	1.00	25.93	A
ATOM	1261	CZ	TYR A 161	60.450	27.650	18.270	1.00	27.56	A
ATOM	1262	OH	TYR A 161	60.182	28.650	19.173	1.00	29.78	A
ATOM	1263	C	TYR A 161	62.330	23.700	13.397	1.00	25.15	A
ATOM	1264	O	TYR A 161	62.082	24.021	12.239	1.00	24.96	A
ATOM	1265	N	ASP A 162	62.600	22.455	13.775	1.00	26.26	A
ATOM	1266	CA	ASP A 162	62.598	21.331	12.858	1.00	26.94	A
ATOM	1267	CB	ASP A 162	64.007	21.014	12.356	1.00	30.11	A
ATOM	1268	CG	ASP A 162	64.548	22.067	11.434	1.00	32.85	A
ATOM	1269	OD1	ASP A 162	64.075	22.138	10.277	1.00	33.31	A
ATOM	1270	OD2	ASP A 162	65.443	22.819	11.874	1.00	33.08	A
ATOM	1271	C	ASP A 162	62.122	20.117	13.613	1.00	25.87	A
ATOM	1272	O	ASP A 162	62.449	19.947	14.789	1.00	24.38	A
ATOM	1273	N	CYS A 163	61.352	19.277	12.935	1.00	23.95	A
ATOM	1274	CA	CYS A 163	60.914	18.027	13.530	1.00	24.46	A
ATOM	1275	C	CYS A 163	61.916	17.043	12.938	1.00	22.46	A
ATOM	1276	O	CYS A 163	62.110	17.021	11.726	1.00	24.01	A
ATOM	1277	CB	CYS A 163	59.497	17.658	13.083	1.00	24.14	A
ATOM	1278	SG	CYS A 163	58.931	16.101	13.836	1.00	30.35	A
ATOM	1279	N	LYS A 164	62.571	16.259	13.782	1.00	22.96	A
ATOM	1280	CA	LYS A 164	63.559	15.292	13.307	1.00	24.69	A
ATOM	1281	CB	LYS A 164	64.867	15.450	14.089	1.00	27.54	A
ATOM	1282	CG	LYS A 164	65.977	14.490	13.689	1.00	28.93	A
ATOM	1283	CD	LYS A 164	67.179	14.643	14.622	1.00	32.03	A
ATOM	1284	CE	LYS A 164	68.254	13.596	14.350	1.00	33.85	A
ATOM	1285	NZ	LYS A 164	69.319	13.607	15.398	1.00	36.46	A
ATOM	1286	C	LYS A 164	63.023	13.875	13.463	1.00	24.25	A
ATOM	1287	O	LYS A 164	62.697	13.443	14.570	1.00	23.52	A
ATOM	1288	N	VAL A 165	62.931	13.160	12.345	1.00	23.37	A
ATOM	1289	CA	VAL A 165	62.415	11.797	12.344	1.00	24.06	A
ATOM	1290	CB	VAL A 165	61.174	11.682	11.408	1.00	23.45	A
ATOM	1291	CG1	VAL A 165	60.657	10.248	11.382	1.00	18.80	A
ATOM	1292	CG2	VAL A 165	60.078	12.632	11.878	1.00	22.37	A
ATOM	1293	C	VAL A 165	63.457	10.772	11.903	1.00	25.04	A
ATOM	1294	O	VAL A 165	64.103	10.931	10.869	1.00	25.12	A
ATOM	1295	N	GLU A 166	63.621	9.725	12.703	1.00	26.91	A
ATOM	1296	CA	GLU A 166	64.556	8.648	12.383	1.00	28.84	A
ATOM	1297	CB	GLU A 166	65.554	8.424	13.523	1.00	30.71	A
ATOM	1298	CG	GLU A 166	66.382	9.634	13.922	1.00	36.90	A
ATOM	1299	CD	GLU A 166	67.247	9.356	15.147	1.00	39.97	A
ATOM	1300	OE1	GLU A 166	67.466	10.286	15.954	1.00	43.02	A
ATOM	1301	OE2	GLU A 166	67.714	8.206	15.301	1.00	43.24	A
ATOM	1302	C	GLU A 166	63.739	7.369	12.183	1.00	28.96	A
ATOM	1303	O	GLU A 166	62.975	6.971	13.067	1.00	27.40	A
ATOM	1304	N	HIS A 167	63.910	6.728	11.029	1.00	29.87	A
ATOM	1305	CA	HIS A 167	63.189	5.496	10.713	1.00	30.70	A
ATOM	1306	CB	HIS A 167	61.838	5.833	10.084	1.00	30.90	A
ATOM	1307	CG	HIS A 167	60.932	4.655	9.933	1.00	34.01	A
ATOM	1308	CD2	HIS A 167	60.698	3.842	8.876	1.00	33.60	A
ATOM	1309	ND1	HIS A 167	60.159	4.172	10.967	1.00	36.69	A
ATOM	1310	CE1	HIS A 167	59.488	3.112	10.554	1.00	34.84	A
ATOM	1311	NE2	HIS A 167	59.798	2.890	9.290	1.00	34.90	A
ATOM	1312	C	HIS A 167	63.999	4.639	9.739	1.00	31.21	A
ATOM	1313	O	HIS A 167	64.696	5.167	8.866	1.00	29.44	A
ATOM	1314	N	TRP A 168	63.895	3.320	9.879	1.00	31.70	A
ATOM	1315	CA	TRP A 168	64.625	2.402	9.006	1.00	31.76	A
ATOM	1316	CB	TRP A 168	64.344	0.954	9.396	1.00	30.39	A
ATOM	1317	CG	TRP A 168	64.735	0.650	10.797	1.00	28.49	A
ATOM	1318	CD2	TRP A 168	64.115	-0.297	11.666	1.00	28.31	A
ATOM	1319	CE2	TRP A 168	64.837	-0.288	12.878	1.00	28.31	A
ATOM	1320	CE3	TRP A 168	63.017	-1.157	11.538	1.00	26.47	A
ATOM	1321	CD1	TRP A 168	65.778	1.184	11.491	1.00	28.32	A
ATOM	1322	NE1	TRP A 168	65.849	0.627	12.744	1.00	28.98	A
ATOM	1323	CZ2	TRP A 168	64.498	-1.107	13.958	1.00	28.85	A
ATOM	1324	CZ3	TRP A 168	62.678	-1.970	12.608	1.00	27.57	A
ATOM	1325	CH2	TRP A 168	63.418	-1.940	13.805	1.00	29.20	A
ATOM	1326	C	TRP A 168	64.332	2.588	7.523	1.00	33.06	A
ATOM	1327	O	TRP A 168	65.190	2.314	6.682	1.00	32.28	A

ATOM	1328	N	GLY A 169	63.126	3.049	7.202	1.00 34.81	A
ATOM	1329	CA	GLY A 169	62.760	3.263	5.810	1.00 35.23	A
ATOM	1330	C	GLY A 169	63.267	4.588	5.266	1.00 37.25	A
ATOM	1331	O	GLY A 169	62.907	4.992	4.162	1.00 37.65	A
ATOM	1332	N	LEU A 170	64.100	5.268	6.049	1.00 39.27	A
ATOM	1333	CA	LEU A 170	64.673	6.555	5.660	1.00 41.10	A
ATOM	1334	CB	LEU A 170	64.354	7.626	6.706	1.00 38.47	A
ATOM	1335	CG	LEU A 170	62.923	8.143	6.843	1.00 38.66	A
ATOM	1336	CD1	LEU A 170	62.790	8.919	8.142	1.00 37.48	A
ATOM	1337	CD2	LEU A 170	62.572	9.017	5.653	1.00 37.65	A
ATOM	1338	C	LEU A 170	66.183	6.425	5.556	1.00 43.62	A
ATOM	1339	O	LEU A 170	66.809	5.762	6.382	1.00 44.45	A
ATOM	1340	N	ASP A 171	66.764	7.066	4.545	1.00 46.98	A
ATOM	1341	CA	ASP A 171	68.211	7.036	4.350	1.00 48.99	A
ATOM	1342	CB	ASP A 171	68.602	7.810	3.086	1.00 51.12	A
ATOM	1343	CG	ASP A 171	67.735	7.466	1.895	1.00 53.30	A
ATOM	1344	OD1	ASP A 171	66.520	7.761	1.936	1.00 54.82	A
ATOM	1345	OD2	ASP A 171	68.271	6.903	0.917	1.00 54.86	A
ATOM	1346	C	ASP A 171	68.836	7.726	5.554	1.00 48.82	A
ATOM	1347	O	ASP A 171	69.437	7.093	6.420	1.00 48.88	A
ATOM	1348	N	LYS A 172	68.673	9.044	5.585	1.00 48.96	A
ATOM	1349	CA	LYS A 172	69.192	9.877	6.659	1.00 48.79	A
ATOM	1350	CB	LYS A 172	69.986	11.059	6.084	1.00 51.32	A
ATOM	1351	CG	LYS A 172	71.074	10.698	5.075	1.00 55.53	A
ATOM	1352	CD	LYS A 172	71.799	11.952	4.571	1.00 57.81	A
ATOM	1353	CE	LYS A 172	72.859	11.621	3.518	1.00 59.22	A
ATOM	1354	NZ	LYS A 172	73.912	10.702	4.038	1.00 58.32	A
ATOM	1355	C	LYS A 172	67.990	10.419	7.420	1.00 46.36	A
ATOM	1356	O	LYS A 172	66.862	10.381	6.919	1.00 44.39	A
ATOM	1357	N	PRO A 173	68.211	10.920	8.645	1.00 44.20	A
ATOM	1358	CD	PRO A 173	69.432	10.866	9.469	1.00 44.15	A
ATOM	1359	CA	PRO A 173	67.089	11.462	9.410	1.00 42.74	A
ATOM	1360	CB	PRO A 173	67.768	12.050	10.637	1.00 42.02	A
ATOM	1361	CG	PRO A 173	68.887	11.080	10.872	1.00 44.25	A
ATOM	1362	C	PRO A 173	66.369	12.517	8.578	1.00 41.09	A
ATOM	1363	O	PRO A 173	67.002	13.309	7.877	1.00 39.67	A
ATOM	1364	N	LEU A 174	65.044	12.502	8.636	1.00 39.80	A
ATOM	1365	CA	LEU A 174	64.241	13.457	7.888	1.00 38.58	A
ATOM	1366	CB	LEU A 174	62.894	12.838	7.522	1.00 38.73	A
ATOM	1367	CG	LEU A 174	62.202	13.329	6.251	1.00 39.18	A
ATOM	1368	CD1	LEU A 174	60.826	12.691	6.170	1.00 39.20	A
ATOM	1369	CD2	LEU A 174	62.093	14.836	6.245	1.00 40.87	A
ATOM	1370	C	LEU A 174	64.019	14.662	8.785	1.00 37.43	A
ATOM	1371	O	LEU A 174	63.630	14.514	9.943	1.00 37.68	A
ATOM	1372	N	LEU A 175	64.284	15.849	8.255	1.00 35.85	A
ATOM	1373	CA	LEU A 175	64.098	17.077	9.012	1.00 34.38	A
ATOM	1374	CB	LEU A 175	65.400	17.882	9.074	1.00 33.21	A
ATOM	1375	CG	LEU A 175	66.425	17.502	10.147	1.00 34.82	A
ATOM	1376	CD1	LEU A 175	65.838	17.768	11.526	1.00 34.32	A
ATOM	1377	CD2	LEU A 175	66.819	16.038	10.008	1.00 35.37	A
ATOM	1378	C	LEU A 175	63.020	17.898	8.337	1.00 33.09	A
ATOM	1379	O	LEU A 175	63.080	18.137	7.132	1.00 33.84	A
ATOM	1380	N	LYS A 176	62.023	18.312	9.108	1.00 30.14	A
ATOM	1381	CA	LYS A 176	60.943	19.119	8.566	1.00 30.03	A
ATOM	1382	CB	LYS A 176	59.598	18.416	8.772	1.00 30.60	A
ATOM	1383	CG	LYS A 176	58.463	19.049	8.010	1.00 33.60	A
ATOM	1384	CD	LYS A 176	58.742	19.054	6.508	1.00 37.73	A
ATOM	1385	CE	LYS A 176	58.869	17.642	5.960	1.00 37.37	A
ATOM	1386	NZ	LYS A 176	59.075	17.629	4.484	1.00 41.15	A
ATOM	1387	C	LYS A 176	60.976	20.457	9.292	1.00 28.62	A
ATOM	1388	O	LYS A 176	60.764	20.524	10.501	1.00 27.68	A
ATOM	1389	N	HIS A 177	61.238	21.520	8.539	1.00 28.72	A
ATOM	1390	CA	HIS A 177	61.353	22.868	9.088	1.00 29.54	A
ATOM	1391	CB	HIS A 177	62.284	23.691	8.195	1.00 29.51	A
ATOM	1392	CG	HIS A 177	62.485	25.097	8.663	1.00 30.53	A
ATOM	1393	CD2	HIS A 177	62.124	26.282	8.114	1.00 31.99	A
ATOM	1394	ND1	HIS A 177	63.117	25.401	9.849	1.00 32.09	A
ATOM	1395	CE1	HIS A 177	63.138	26.713	10.010	1.00 32.65	A
ATOM	1396	NE2	HIS A 177	62.542	27.271	8.971	1.00 32.04	A
ATOM	1397	C	HIS A 177	60.059	23.654	9.304	1.00 29.24	A
ATOM	1398	O	HIS A 177	59.100	23.519	8.549	1.00 27.66	A
ATOM	1399	N	TRP A 178	60.062	24.492	10.340	1.00 30.09	A
ATOM	1400	CA	TRP A 178	58.926	25.350	10.674	1.00 33.43	A
ATOM	1401	CB	TRP A 178	57.959	24.647	11.632	1.00 28.07	A

ATOM	1402	CG	TRP A 178	56.681	25.422	11.851	1.00	25.25	A
ATOM	1403	CD2	TRP A 178	56.476	26.518	12.761	1.00	21.68	A
ATOM	1404	CE2	TRP A 178	55.138	26.942	12.611	1.00	20.86	A
ATOM	1405	CE3	TRP A 178	57.292	27.178	13.688	1.00	20.72	A
ATOM	1406	CD1	TRP A 178	55.489	25.239	11.206	1.00	24.81	A
ATOM	1407	NE1	TRP A 178	54.559	26.146	11.657	1.00	21.51	A
ATOM	1408	CZ2	TRP A 178	54.598	27.999	13.354	1.00	21.11	A
ATOM	1409	CZ3	TRP A 178	56.754	28.229	14.428	1.00	21.58	A
ATOM	1410	CH2	TRP A 178	55.419	28.627	14.255	1.00	20.94	A
ATOM	1411	C	TRP A 178	59.425	26.628	11.348	1.00	36.30	A
ATOM	1412	O	TRP A 178	60.314	26.591	12.195	1.00	36.91	A
ATOM	1413	N	GLU A 179	58.852	27.761	10.975	1.00	40.65	A
ATOM	1414	CA	GLU A 179	59.240	29.029	11.587	1.00	45.62	A
ATOM	1415	CB	GLU A 179	60.481	29.622	10.899	1.00	47.42	A
ATOM	1416	CG	GLU A 179	60.323	29.868	9.404	1.00	52.77	A
ATOM	1417	CD	GLU A 179	61.498	30.624	8.806	1.00	55.17	A
ATOM	1418	OE1	GLU A 179	62.653	30.179	8.987	1.00	57.20	A
ATOM	1419	OE2	GLU A 179	61.265	31.663	8.149	1.00	57.21	A
ATOM	1420	C	GLU A 179	58.074	30.001	11.489	1.00	46.47	A
ATOM	1421	O	GLU A 179	57.322	29.983	10.513	1.00	45.49	A
ATOM	1422	N	PRO A 180	57.898	30.855	12.509	1.00	47.97	A
ATOM	1423	CD	PRO A 180	58.679	31.008	13.752	1.00	48.35	A
ATOM	1424	CA	PRO A 180	56.789	31.810	12.460	1.00	49.45	A
ATOM	1425	CB	PRO A 180	56.763	32.372	13.880	1.00	49.39	A
ATOM	1426	CG	PRO A 180	58.214	32.358	14.266	1.00	48.65	A
ATOM	1427	C	PRO A 180	57.014	32.891	11.401	1.00	50.21	A
ATOM	1428	O	PRO A 180	58.174	33.041	10.950	1.00	49.95	A
ATOM	1429	OXT	PRO A 180	56.030	33.578	11.043	1.00	50.90	A
ATOM	1430	CB	SER B 3	67.953	-2.426	7.203	1.00	59.72	B
ATOM	1431	OG	SER B 3	68.517	-3.384	6.321	1.00	60.71	B
ATOM	1432	C	SER B 3	68.164	-3.822	9.277	1.00	57.49	B
ATOM	1433	O	SER B 3	68.117	-4.879	8.642	1.00	57.32	B
ATOM	1434	N	SER B 3	70.072	-2.418	8.486	1.00	59.35	B
ATOM	1435	CA	SER B 3	68.586	-2.517	8.597	1.00	58.84	B
ATOM	1436	N	PRO B 4	67.855	-3.763	10.585	1.00	55.71	B
ATOM	1437	CD	PRO B 4	67.914	-2.580	11.463	1.00	54.97	B
ATOM	1438	CA	PRO B 4	67.438	-4.952	11.338	1.00	53.72	B
ATOM	1439	CB	PRO B 4	67.457	-4.467	12.787	1.00	54.71	B
ATOM	1440	CG	PRO B 4	67.095	-3.021	12.660	1.00	54.93	B
ATOM	1441	C	PRO B 4	66.069	-5.487	10.918	1.00	51.05	B
ATOM	1442	O	PRO B 4	65.240	-4.753	10.379	1.00	50.96	B
ATOM	1443	N	GLU B 5	65.843	-6.773	11.165	1.00	47.90	B
ATOM	1444	CA	GLU B 5	64.581	-7.410	10.810	1.00	45.24	B
ATOM	1445	CB	GLU B 5	64.811	-8.893	10.489	1.00	48.23	B
ATOM	1446	CG	GLU B 5	65.603	-9.656	11.545	1.00	54.54	B
ATOM	1447	CD	GLU B 5	65.896	-11.102	11.140	1.00	57.83	B
ATOM	1448	OE1	GLU B 5	66.421	-11.317	10.024	1.00	59.67	B
ATOM	1449	OE2	GLU B 5	65.609	-12.020	11.941	1.00	59.33	B
ATOM	1450	C	GLU B 5	63.548	-7.269	11.920	1.00	40.85	B
ATOM	1451	O	GLU B 5	63.876	-7.328	13.105	1.00	40.81	B
ATOM	1452	N	ASP B 6	62.294	-7.083	11.532	1.00	36.03	B
ATOM	1453	CA	ASP B 6	61.223	-6.936	12.508	1.00	32.11	B
ATOM	1454	CB	ASP B 6	60.833	-5.460	12.616	1.00	29.96	B
ATOM	1455	CG	ASP B 6	59.933	-5.171	13.798	1.00	27.91	B
ATOM	1456	OD1	ASP B 6	59.280	-4.110	13.785	1.00	29.62	B
ATOM	1457	OD2	ASP B 6	59.884	-5.982	14.745	1.00	29.86	B
ATOM	1458	C	ASP B 6	60.014	-7.766	12.077	1.00	29.68	B
ATOM	1459	O	ASP B 6	59.676	-7.802	10.899	1.00	29.14	B
ATOM	1460	N	PHE B 7	59.380	-8.438	13.032	1.00	27.77	B
ATOM	1461	CA	PHE B 7	58.193	-9.249	12.765	1.00	28.11	B
ATOM	1462	CB	PHE B 7	58.453	-10.704	13.161	1.00	29.55	B
ATOM	1463	CG	PHE B 7	59.461	-11.385	12.282	1.00	31.06	B
ATOM	1464	CD1	PHE B 7	59.126	-11.766	10.989	1.00	29.85	B
ATOM	1465	CD2	PHE B 7	60.761	-11.603	12.730	1.00	32.21	B
ATOM	1466	CE1	PHE B 7	60.073	-12.355	10.145	1.00	33.75	B
ATOM	1467	CE2	PHE B 7	61.719	-12.190	11.897	1.00	34.27	B
ATOM	1468	CZ	PHE B 7	61.373	-12.568	10.599	1.00	33.07	B
ATOM	1469	C	PHE B 7	57.032	-8.657	13.562	1.00	26.58	B
ATOM	1470	O	PHE B 7	57.046	-8.645	14.794	1.00	25.72	B
ATOM	1471	N	VAL B 8	56.023	-8.174	12.849	1.00	25.17	B
ATOM	1472	CA	VAL B 8	54.891	-7.520	13.493	1.00	23.46	B
ATOM	1473	CB	VAL B 8	54.670	-6.132	12.871	1.00	21.55	B
ATOM	1474	CG1	VAL B 8	53.573	-5.394	13.612	1.00	21.83	B
ATOM	1475	CG2	VAL B 8	55.975	-5.342	12.895	1.00	21.30	B

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ATOM	1476	C	VAL	B	8	53.556	-8.255	13.467	1.00	24.08	B
ATOM	1477	O	VAL	B	8	53.204	-8.912	12.491	1.00	23.46	B
ATOM	1478	N	TYR	B	9	52.804	-8.127	14.554	1.00	23.26	B
ATOM	1479	CA	TYR	B	9	51.493	-8.747	14.619	1.00	23.18	B
ATOM	1480	CB	TYR	B	9	51.510	-9.978	15.520	1.00	23.12	B
ATOM	1481	CG	TYR	B	9	50.231	-10.786	15.465	1.00	24.54	B
ATOM	1482	CD1	TYR	B	9	50.158	-11.962	14.722	1.00	26.50	B
ATOM	1483	CE1	TYR	B	9	49.000	-12.743	14.716	1.00	25.08	B
ATOM	1484	CD2	TYR	B	9	49.108	-10.399	16.190	1.00	22.88	B
ATOM	1485	CE2	TYR	B	9	47.948	-11.165	16.188	1.00	23.91	B
ATOM	1486	CZ	TYR	B	9	47.902	-12.342	15.455	1.00	24.87	B
ATOM	1487	OH	TYR	B	9	46.780	-13.140	15.501	1.00	25.45	B
ATOM	1488	C	TYR	B	9	50.509	-7.723	15.163	1.00	21.33	B
ATOM	1489	O	TYR	B	9	50.798	-7.028	16.133	1.00	22.92	B
ATOM	1490	N	GLN	B	10	49.353	-7.622	14.521	1.00	19.98	B
ATOM	1491	CA	GLN	B	10	48.326	-6.687	14.952	1.00	19.52	B
ATOM	1492	CB	GLN	B	10	48.171	-5.523	13.962	1.00	19.13	B
ATOM	1493	CG	GLN	B	10	49.433	-4.810	13.509	1.00	19.33	B
ATOM	1494	CD	GLN	B	10	49.117	-3.708	12.499	1.00	17.96	B
ATOM	1495	OE1	GLN	B	10	48.336	-2.802	12.783	1.00	18.49	B
ATOM	1496	NE2	GLN	B	10	49.715	-3.790	11.316	1.00	19.41	B
ATOM	1497	C	GLN	B	10	46.967	-7.375	15.029	1.00	19.74	B
ATOM	1498	O	GLN	B	10	46.626	-8.227	14.192	1.00	18.98	B
ATOM	1499	N	PHE	B	11	46.195	-6.996	16.040	1.00	19.06	B
ATOM	1500	CA	PHE	B	11	44.842	-7.487	16.182	1.00	16.54	B
ATOM	1501	CB	PHE	B	11	44.668	-8.454	17.336	1.00	17.48	B
ATOM	1502	CG	PHE	B	11	43.237	-8.847	17.544	1.00	16.17	B
ATOM	1503	CD1	PHE	B	11	42.570	-9.604	16.582	1.00	17.49	B
ATOM	1504	CD2	PHE	B	11	42.536	-8.406	18.656	1.00	14.41	B
ATOM	1505	CE1	PHE	B	11	41.219	-9.913	16.725	1.00	18.03	B
ATOM	1506	CE2	PHE	B	11	41.191	-8.708	18.814	1.00	16.34	B
ATOM	1507	CZ	PHE	B	11	40.528	-9.463	17.845	1.00	17.60	B
ATOM	1508	C	PHE	B	11	43.984	-6.271	16.450	1.00	18.14	B
ATOM	1509	O	PHE	B	11	44.241	-5.506	17.386	1.00	15.63	B
ATOM	1510	N	LYS	B	12	42.961	-6.094	15.625	1.00	17.33	B
ATOM	1511	CA	LYS	B	12	42.082	-4.958	15.770	1.00	17.63	B
ATOM	1512	CB	LYS	B	12	42.188	-4.067	14.536	1.00	18.71	B
ATOM	1513	CG	LYS	B	12	43.599	-3.642	14.192	1.00	15.90	B
ATOM	1514	CD	LYS	B	12	43.602	-2.909	12.871	1.00	17.33	B
ATOM	1515	CE	LYS	B	12	44.946	-2.297	12.570	1.00	18.72	B
ATOM	1516	NZ	LYS	B	12	44.838	-1.450	11.340	1.00	20.93	B
ATOM	1517	C	LYS	B	12	40.632	-5.387	15.968	1.00	18.92	B
ATOM	1518	O	LYS	B	12	40.041	-6.050	15.109	1.00	17.25	B
ATOM	1519	N	GLY	B	13	40.076	-5.002	17.114	1.00	17.59	B
ATOM	1520	CA	GLY	B	13	38.701	-5.322	17.430	1.00	19.88	B
ATOM	1521	C	GLY	B	13	37.874	-4.113	17.064	1.00	20.12	B
ATOM	1522	O	GLY	B	13	37.515	-3.309	17.923	1.00	21.08	B
ATOM	1523	N	MET	B	14	37.561	-4.000	15.779	1.00	20.42	B
ATOM	1524	CA	MET	B	14	36.817	-2.866	15.262	1.00	22.96	B
ATOM	1525	CB	MET	B	14	37.334	-2.554	13.866	1.00	23.02	B
ATOM	1526	CG	MET	B	14	38.846	-2.485	13.820	1.00	23.58	B
ATOM	1527	SD	MET	B	14	39.449	-2.095	12.191	1.00	26.23	B
ATOM	1528	CE	MET	B	14	39.260	-0.318	12.182	1.00	25.78	B
ATOM	1529	C	MET	B	14	35.295	-2.997	15.242	1.00	23.12	B
ATOM	1530	O	MET	B	14	34.751	-4.089	15.081	1.00	24.36	B
ATOM	1531	N	CYS	B	15	34.628	-1.860	15.427	1.00	24.04	B
ATOM	1532	CA	CYS	B	15	33.173	-1.768	15.433	1.00	24.91	B
ATOM	1533	C	CYS	B	15	32.808	-0.587	14.547	1.00	25.49	B
ATOM	1534	O	CYS	B	15	33.369	0.504	14.700	1.00	23.97	B
ATOM	1535	CB	CYS	B	15	32.630	-1.489	16.847	1.00	26.02	B
ATOM	1536	SG	CYS	B	15	32.691	-2.831	18.084	1.00	33.69	B
ATOM	1537	N	TYR	B	16	31.871	-0.805	13.630	1.00	25.87	B
ATOM	1538	CA	TYR	B	16	31.413	0.244	12.724	1.00	25.59	B
ATOM	1539	CB	TYR	B	16	31.539	-0.223	11.274	1.00	24.73	B
ATOM	1540	CG	TYR	B	16	32.958	-0.575	10.879	1.00	26.05	B
ATOM	1541	CD1	TYR	B	16	33.523	-1.795	11.239	1.00	22.96	B
ATOM	1542	CE1	TYR	B	16	34.843	-2.102	10.904	1.00	25.81	B
ATOM	1543	CD2	TYR	B	16	33.748	0.334	10.171	1.00	25.30	B
ATOM	1544	CE2	TYR	B	16	35.066	0.041	9.835	1.00	25.12	B
ATOM	1545	CZ	TYR	B	16	35.607	-1.176	10.202	1.00	26.66	B
ATOM	1546	OH	TYR	B	16	36.908	-1.463	9.868	1.00	29.22	B
ATOM	1547	C	TYR	B	16	29.960	0.575	13.045	1.00	26.48	B
ATOM	1548	O	TYR	B	16	29.113	-0.315	13.091	1.00	26.41	B
ATOM	1549	N	PHE	B	17	29.684	1.859	13.266	1.00	27.76	B

ATOM	1550	CA	PHE B	17	28.346	2.338	13.613	1.00	29.09	B
ATOM	1551	CB	PHE B	17	28.382	3.047	14.967	1.00	28.08	B
ATOM	1552	CG	PHE B	17	28.885	2.194	16.091	1.00	28.21	B
ATOM	1553	CD1	PHE B	17	28.056	1.253	16.693	1.00	27.20	B
ATOM	1554	CD2	PHE B	17	30.188	2.340	16.558	1.00	26.60	B
ATOM	1555	CE1	PHE B	17	28.519	0.470	17.752	1.00	28.13	B
ATOM	1556	CE2	PHE B	17	30.662	1.565	17.610	1.00	25.62	B
ATOM	1557	CZ	PHE B	17	29.828	0.629	18.210	1.00	26.17	B
ATOM	1558	C	PHE B	17	27.772	3.318	12.592	1.00	30.71	B
ATOM	1559	O	PHE B	17	28.452	4.239	12.155	1.00	31.05	B
ATOM	1560	N	THR B	18	26.506	3.125	12.237	1.00	33.51	B
ATOM	1561	CA	THR B	18	25.831	4.005	11.291	1.00	36.95	B
ATOM	1562	CB	THR B	18	25.797	3.395	9.875	1.00	37.23	B
ATOM	1563	OG1	THR B	18	27.133	3.105	9.447	1.00	40.77	B
ATOM	1564	CG2	THR B	18	25.171	4.369	8.891	1.00	38.43	B
ATOM	1565	C	THR B	18	24.398	4.273	11.753	1.00	38.56	B
ATOM	1566	O	THR B	18	23.671	3.351	12.131	1.00	38.36	B
ATOM	1567	N	ASN B	19	24.007	5.544	11.726	1.00	39.80	B
ATOM	1568	CA	ASN B	19	22.668	5.961	12.132	1.00	41.35	B
ATOM	1569	CB	ASN B	19	21.638	5.465	11.110	1.00	41.21	B
ATOM	1570	CG	ASN B	19	20.311	6.190	11.223	1.00	42.85	B
ATOM	1571	OD1	ASN B	19	20.271	7.378	11.548	1.00	42.24	B
ATOM	1572	ND2	ASN B	19	19.219	5.485	10.937	1.00	42.57	B
ATOM	1573	C	ASN B	19	22.352	5.416	13.521	1.00	42.37	B
ATOM	1574	O	ASN B	19	21.540	4.503	13.673	1.00	43.36	B
ATOM	1575	N	GLY B	20	22.997	5.989	14.533	1.00	42.56	B
ATOM	1576	CA	GLY B	20	22.790	5.535	15.894	1.00	43.89	B
ATOM	1577	C	GLY B	20	23.293	4.110	16.031	1.00	45.10	B
ATOM	1578	O	GLY B	20	24.421	3.807	15.646	1.00	44.28	B
ATOM	1579	N	THR B	21	22.458	3.232	16.575	1.00	46.37	B
ATOM	1580	CA	THR B	21	22.824	1.832	16.738	1.00	47.42	B
ATOM	1581	CB	THR B	21	22.667	1.373	18.199	1.00	48.57	B
ATOM	1582	OG1	THR B	21	21.438	1.885	18.731	1.00	49.14	B
ATOM	1583	CG2	THR B	21	23.843	1.856	19.043	1.00	47.59	B
ATOM	1584	C	THR B	21	21.958	0.947	15.846	1.00	48.74	B
ATOM	1585	O	THR B	21	21.925	-0.276	16.016	1.00	48.04	B
ATOM	1586	N	GLU B	22	21.253	1.570	14.902	1.00	48.57	B
ATOM	1587	CA	GLU B	22	20.405	0.822	13.979	1.00	48.90	B
ATOM	1588	CB	GLU B	22	19.741	1.745	12.957	1.00	52.60	B
ATOM	1589	CG	GLU B	22	18.669	2.667	13.493	1.00	58.06	B
ATOM	1590	CD	GLU B	22	17.862	3.297	12.368	1.00	62.27	B
ATOM	1591	OE1	GLU B	22	17.027	4.185	12.648	1.00	63.99	B
ATOM	1592	OE2	GLU B	22	18.065	2.894	11.199	1.00	64.70	B
ATOM	1593	C	GLU B	22	21.285	-0.156	13.229	1.00	46.38	B
ATOM	1594	O	GLU B	22	21.029	-1.356	13.209	1.00	45.52	B
ATOM	1595	N	ARG B	23	22.324	0.379	12.601	1.00	45.42	B
ATOM	1596	CA	ARG B	23	23.260	-0.438	11.844	1.00	44.59	B
ATOM	1597	CB	ARG B	23	23.423	0.127	10.422	1.00	45.69	B
ATOM	1598	CG	ARG B	23	22.169	-0.062	9.554	1.00	49.95	B
ATOM	1599	CD	ARG B	23	22.406	0.237	8.074	1.00	53.34	B
ATOM	1600	NE	ARG B	23	22.153	1.632	7.708	1.00	55.57	B
ATOM	1601	CZ	ARG B	23	20.949	2.200	7.700	1.00	57.20	B
ATOM	1602	NH1	ARG B	23	19.878	1.495	8.042	1.00	58.09	B
ATOM	1603	NH2	ARG B	23	20.813	3.471	7.340	1.00	56.82	B
ATOM	1604	C	ARG B	23	24.606	-0.534	12.567	1.00	40.56	B
ATOM	1605	O	ARG B	23	25.306	0.459	12.748	1.00	41.15	B
ATOM	1606	N	VAL B	24	24.944	-1.743	12.995	1.00	38.17	B
ATOM	1607	CA	VAL B	24	26.191	-1.996	13.708	1.00	34.88	B
ATOM	1608	CB	VAL B	24	25.931	-2.314	15.200	1.00	34.41	B
ATOM	1609	CG1	VAL B	24	27.251	-2.526	15.918	1.00	35.28	B
ATOM	1610	CG2	VAL B	24	25.146	-1.190	15.852	1.00	34.70	B
ATOM	1611	C	VAL B	24	26.909	-3.194	13.100	1.00	32.34	B
ATOM	1612	O	VAL B	24	26.287	-4.214	12.812	1.00	33.23	B
ATOM	1613	N	ARG B	25	28.217	-3.076	12.898	1.00	30.18	B
ATOM	1614	CA	ARG B	25	28.970	-4.194	12.354	1.00	26.97	B
ATOM	1615	CB	ARG B	25	29.225	-4.022	10.852	1.00	27.67	B
ATOM	1616	CG	ARG B	25	29.400	-5.362	10.170	1.00	29.58	B
ATOM	1617	CD	ARG B	25	30.406	-5.363	9.052	1.00	31.26	B
ATOM	1618	NE	ARG B	25	30.058	-4.454	7.974	1.00	33.12	B
ATOM	1619	CZ	ARG B	25	30.415	-4.631	6.705	1.00	32.27	B
ATOM	1620	NH1	ARG B	25	31.124	-5.695	6.346	1.00	31.13	B
ATOM	1621	NH2	ARG B	25	30.087	-3.726	5.799	1.00	30.62	B
ATOM	1622	C	ARG B	25	30.305	-4.402	13.065	1.00	24.10	B
ATOM	1623	O	ARG B	25	31.095	-3.477	13.225	1.00	22.56	B

ATOM	1624	N	LEU	B	26	30.551	-5.630	13.495	1.00	22.65	B
ATOM	1625	CA	LEU	B	26	31.801	-5.942	14.163	1.00	22.38	B
ATOM	1626	CB	LEU	B	26	31.558	-6.888	15.345	1.00	20.25	B
ATOM	1627	CG	LEU	B	26	32.795	-7.389	16.100	1.00	19.86	B
ATOM	1628	CD1	LEU	B	26	32.452	-7.613	17.568	1.00	22.49	B
ATOM	1629	CD2	LEU	B	26	33.304	-8.665	15.464	1.00	18.43	B
ATOM	1630	C	LEU	B	26	32.726	-6.591	13.150	1.00	21.50	B
ATOM	1631	O	LEU	B	26	32.289	-7.402	12.342	1.00	22.83	B
ATOM	1632	N	VAL	B	27	33.998	-6.208	13.177	1.00	21.29	B
ATOM	1633	CA	VAL	B	27	34.984	-6.780	12.270	1.00	20.66	B
ATOM	1634	CB	VAL	B	27	35.178	-5.911	11.004	1.00	20.59	B
ATOM	1635	CG1	VAL	B	27	36.169	-6.576	10.069	1.00	19.45	B
ATOM	1636	CG2	VAL	B	27	33.849	-5.696	10.297	1.00	22.37	B
ATOM	1637	C	VAL	B	27	36.330	-6.885	12.988	1.00	22.39	B
ATOM	1638	O	VAL	B	27	37.046	-5.889	13.135	1.00	22.63	B
ATOM	1639	N	SER	B	28	36.673	-8.083	13.450	1.00	21.32	B
ATOM	1640	CA	SER	B	28	37.947	-8.259	14.130	1.00	21.51	B
ATOM	1641	CB	SER	B	28	37.831	-9.284	15.275	1.00	19.72	B
ATOM	1642	OG	SER	B	28	37.542	-10.581	14.819	1.00	24.33	B
ATOM	1643	C	SER	B	28	38.954	-8.693	13.074	1.00	21.25	B
ATOM	1644	O	SER	B	28	38.661	-9.537	12.229	1.00	19.44	B
ATOM	1645	N	ARG	B	29	40.137	-8.089	13.106	1.00	20.61	B
ATOM	1646	CA	ARG	B	29	41.158	-8.402	12.115	1.00	19.66	B
ATOM	1647	CB	ARG	B	29	41.418	-7.169	11.230	1.00	19.91	B
ATOM	1648	CG	ARG	B	29	40.178	-6.407	10.754	1.00	16.79	B
ATOM	1649	CD	ARG	B	29	40.608	-5.121	10.031	1.00	18.10	B
ATOM	1650	NE	ARG	B	29	39.487	-4.318	9.553	1.00	19.38	B
ATOM	1651	CZ	ARG	B	29	38.738	-4.619	8.497	1.00	20.62	B
ATOM	1652	NH1	ARG	B	29	38.983	-5.714	7.789	1.00	19.50	B
ATOM	1653	NH2	ARG	B	29	37.736	-3.822	8.149	1.00	21.90	B
ATOM	1654	C	ARG	B	29	42.482	-8.833	12.738	1.00	18.57	B
ATOM	1655	O	ARG	B	29	43.024	-8.121	13.584	1.00	19.40	B
ATOM	1656	N	SER	B	30	42.991	-9.995	12.326	1.00	18.99	B
ATOM	1657	CA	SER	B	30	44.284	-10.501	12.797	1.00	21.66	B
ATOM	1658	CB	SER	B	30	44.241	-12.015	13.023	1.00	22.77	B
ATOM	1659	OG	SER	B	30	43.390	-12.352	14.106	1.00	26.81	B
ATOM	1660	C	SER	B	30	45.265	-10.163	11.673	1.00	23.37	B
ATOM	1661	O	SER	B	30	45.055	-10.553	10.522	1.00	21.31	B
ATOM	1662	N	ILE	B	31	46.338	-9.450	12.009	1.00	24.76	B
ATOM	1663	CA	ILE	B	31	47.298	-8.998	10.999	1.00	24.33	B
ATOM	1664	CB	ILE	B	31	47.341	-7.440	10.958	1.00	25.20	B
ATOM	1665	CG2	ILE	B	31	47.982	-6.964	9.672	1.00	23.24	B
ATOM	1666	CG1	ILE	B	31	45.934	-6.857	11.106	1.00	26.96	B
ATOM	1667	CD1	ILE	B	31	45.032	-7.136	9.947	1.00	31.25	B
ATOM	1668	C	ILE	B	31	48.741	-9.460	11.187	1.00	23.98	B
ATOM	1669	O	ILE	B	31	49.298	-9.318	12.272	1.00	22.29	B
ATOM	1670	N	TYR	B	32	49.345	-9.993	10.123	1.00	25.50	B
ATOM	1671	CA	TYR	B	32	50.750	-10.405	10.162	1.00	26.21	B
ATOM	1672	CB	TYR	B	32	50.965	-11.764	9.492	1.00	28.46	B
ATOM	1673	CG	TYR	B	32	52.406	-12.224	9.544	1.00	31.10	B
ATOM	1674	CD1	TYR	B	32	53.050	-12.412	10.765	1.00	32.47	B
ATOM	1675	CE1	TYR	B	32	54.393	-12.780	10.827	1.00	34.69	B
ATOM	1676	CD2	TYR	B	32	53.140	-12.424	8.375	1.00	33.60	B
ATOM	1677	CE2	TYR	B	32	54.484	-12.795	8.422	1.00	34.50	B
ATOM	1678	CZ	TYR	B	32	55.103	-12.965	9.654	1.00	35.65	B
ATOM	1679	OH	TYR	B	32	56.438	-13.281	9.717	1.00	37.73	B
ATOM	1680	C	TYR	B	32	51.478	-9.307	9.384	1.00	25.67	B
ATOM	1681	O	TYR	B	32	51.273	-9.140	8.174	1.00	24.75	B
ATOM	1682	N	ASN	B	33	52.319	-8.559	10.094	1.00	25.63	B
ATOM	1683	CA	ASN	B	33	53.036	-7.416	9.526	1.00	24.95	B
ATOM	1684	CB	ASN	B	33	53.955	-7.848	8.379	1.00	23.75	B
ATOM	1685	CG	ASN	B	33	55.171	-8.615	8.878	1.00	24.11	B
ATOM	1686	OD1	ASN	B	33	55.803	-8.223	9.861	1.00	25.42	B
ATOM	1687	ND2	ASN	B	33	55.506	-9.708	8.204	1.00	25.18	B
ATOM	1688	C	ASN	B	33	51.990	-6.392	9.070	1.00	25.11	B
ATOM	1689	O	ASN	B	33	51.491	-5.618	9.893	1.00	26.06	B
ATOM	1690	N	ARG	B	34	51.652	-6.375	7.786	1.00	25.75	B
ATOM	1691	CA	ARG	B	34	50.631	-5.449	7.296	1.00	27.64	B
ATOM	1692	CB	ARG	B	34	51.244	-4.362	6.408	1.00	27.74	B
ATOM	1693	CG	ARG	B	34	51.972	-3.257	7.158	1.00	29.94	B
ATOM	1694	CD	ARG	B	34	51.664	-1.888	6.541	1.00	32.95	B
ATOM	1695	NE	ARG	B	34	51.897	-1.875	5.101	1.00	35.17	B
ATOM	1696	CZ	ARG	B	34	51.392	-0.973	4.267	1.00	37.51	B
ATOM	1697	NH1	ARG	B	34	50.622	0.003	4.729	1.00	39.45	B

ATOM	1698	NH2	ARG	B	34	51.642	-1.058	2.967	1.00	36.90	B
ATOM	1699	C	ARG	B	34	49.587	-6.218	6.498	1.00	26.48	B
ATOM	1700	O	ARG	B	34	48.740	-5.639	5.825	1.00	27.17	B
ATOM	1701	N	GLU	B	35	49.647	-7.534	6.602	1.00	25.66	B
ATOM	1702	CA	GLU	B	35	48.746	-8.394	5.867	1.00	26.99	B
ATOM	1703	CB	GLU	B	35	49.570	-9.483	5.175	1.00	31.53	B
ATOM	1704	CG	GLU	B	35	48.814	-10.396	4.235	1.00	36.29	B
ATOM	1705	CD	GLU	B	35	49.695	-11.530	3.731	1.00	40.61	B
ATOM	1706	OE1	GLU	B	35	50.825	-11.240	3.276	1.00	45.20	B
ATOM	1707	OE2	GLU	B	35	49.266	-12.705	3.791	1.00	41.13	B
ATOM	1708	C	GLU	B	35	47.699	-9.031	6.764	1.00	25.09	B
ATOM	1709	O	GLU	B	35	48.028	-9.807	7.663	1.00	23.31	B
ATOM	1710	N	GLU	B	36	46.439	-8.689	6.522	1.00	24.53	B
ATOM	1711	CA	GLU	B	36	45.332	-9.263	7.275	1.00	25.73	B
ATOM	1712	CB	GLU	B	36	44.023	-8.519	6.958	1.00	26.62	B
ATOM	1713	CG	GLU	B	36	42.783	-9.095	7.636	1.00	28.26	B
ATOM	1714	CD	GLU	B	36	41.545	-8.232	7.442	1.00	31.08	B
ATOM	1715	OE1	GLU	B	36	41.420	-7.590	6.377	1.00	32.56	B
ATOM	1716	OE2	GLU	B	36	40.685	-8.206	8.349	1.00	32.83	B
ATOM	1717	C	GLU	B	36	45.238	-10.717	6.822	1.00	24.67	B
ATOM	1718	O	GLU	B	36	45.141	-10.992	5.626	1.00	23.91	B
ATOM	1719	N	ILE	B	37	45.282	-11.647	7.771	1.00	26.11	B
ATOM	1720	CA	ILE	B	37	45.219	-13.067	7.433	1.00	27.80	B
ATOM	1721	CB	ILE	B	37	46.444	-13.822	8.013	1.00	27.27	B
ATOM	1722	CG2	ILE	B	37	47.728	-13.174	7.516	1.00	27.41	B
ATOM	1723	CG1	ILE	B	37	46.440	-13.767	9.537	1.00	29.35	B
ATOM	1724	CD1	ILE	B	37	47.596	-14.509	10.175	1.00	30.27	B
ATOM	1725	C	ILE	B	37	43.922	-13.750	7.879	1.00	27.86	B
ATOM	1726	O	ILE	B	37	43.445	-14.674	7.221	1.00	28.29	B
ATOM	1727	N	VAL	B	38	43.348	-13.296	8.989	1.00	28.78	B
ATOM	1728	CA	VAL	B	38	42.097	-13.870	9.487	1.00	29.29	B
ATOM	1729	CB	VAL	B	38	42.294	-14.751	10.741	1.00	30.18	B
ATOM	1730	CG1	VAL	B	38	40.983	-15.452	11.071	1.00	33.17	B
ATOM	1731	CG2	VAL	B	38	43.399	-15.764	10.520	1.00	31.09	B
ATOM	1732	C	VAL	B	38	41.161	-12.745	9.882	1.00	28.75	B
ATOM	1733	O	VAL	B	38	41.585	-11.758	10.480	1.00	29.70	B
ATOM	1734	N	ARG	B	39	39.881	-12.911	9.581	1.00	27.05	B
ATOM	1735	CA	ARG	B	39	38.895	-11.890	9.892	1.00	25.46	B
ATOM	1736	CB	ARG	B	39	38.627	-11.064	8.632	1.00	27.23	B
ATOM	1737	CG	ARG	B	39	37.544	-10.011	8.765	1.00	30.84	B
ATOM	1738	CD	ARG	B	39	37.111	-9.476	7.398	1.00	29.34	B
ATOM	1739	NE	ARG	B	39	38.218	-8.861	6.673	1.00	30.83	B
ATOM	1740	CZ	ARG	B	39	38.116	-8.328	5.459	1.00	31.23	B
ATOM	1741	NH1	ARG	B	39	36.951	-8.333	4.823	1.00	31.08	B
ATOM	1742	NH2	ARG	B	39	39.178	-7.779	4.883	1.00	30.81	B
ATOM	1743	C	ARG	B	39	37.573	-12.476	10.381	1.00	25.41	B
ATOM	1744	O	ARG	B	39	37.192	-13.587	9.996	1.00	25.06	B
ATOM	1745	N	PHE	B	40	36.890	-11.742	11.252	1.00	23.72	B
ATOM	1746	CA	PHE	B	40	35.569	-12.164	11.696	1.00	24.04	B
ATOM	1747	CB	PHE	B	40	35.498	-12.554	13.171	1.00	22.69	B
ATOM	1748	CG	PHE	B	40	34.133	-13.036	13.573	1.00	20.75	B
ATOM	1749	CD1	PHE	B	40	33.777	-14.370	13.413	1.00	21.07	B
ATOM	1750	CD2	PHE	B	40	33.162	-12.135	14.003	1.00	21.00	B
ATOM	1751	CE1	PHE	B	40	32.475	-14.800	13.670	1.00	20.86	B
ATOM	1752	CE2	PHE	B	40	31.858	-12.553	14.261	1.00	19.95	B
ATOM	1753	CZ	PHE	B	40	31.517	-13.890	14.092	1.00	19.78	B
ATOM	1754	C	PHE	B	40	34.662	-10.969	11.474	1.00	24.27	B
ATOM	1755	O	PHE	B	40	34.755	-9.970	12.183	1.00	22.94	B
ATOM	1756	N	ASP	B	41	33.800	-11.088	10.471	1.00	24.75	B
ATOM	1757	CA	ASP	B	41	32.857	-10.040	10.101	1.00	24.98	B
ATOM	1758	CB	ASP	B	41	32.863	-9.881	8.578	1.00	25.64	B
ATOM	1759	CG	ASP	B	41	32.162	-8.626	8.116	1.00	27.70	B
ATOM	1760	OD1	ASP	B	41	31.163	-8.227	8.749	1.00	26.21	B
ATOM	1761	OD2	ASP	B	41	32.607	-8.045	7.102	1.00	30.42	B
ATOM	1762	C	ASP	B	41	31.477	-10.497	10.560	1.00	24.50	B
ATOM	1763	O	ASP	B	41	31.011	-11.558	10.151	1.00	24.95	B
ATOM	1764	N	SER	B	42	30.822	-9.710	11.404	1.00	24.16	B
ATOM	1765	CA	SER	B	42	29.501	-10.096	11.882	1.00	26.13	B
ATOM	1766	CB	SER	B	42	29.013	-9.133	12.972	1.00	24.53	B
ATOM	1767	OG	SER	B	42	28.932	-7.806	12.497	1.00	23.39	B
ATOM	1768	C	SER	B	42	28.497	-10.149	10.729	1.00	27.68	B
ATOM	1769	O	SER	B	42	27.474	-10.833	10.818	1.00	27.31	B
ATOM	1770	N	ASP	B	43	28.789	-9.419	9.654	1.00	28.17	B
ATOM	1771	CA	ASP	B	43	27.924	-9.413	8.477	1.00	29.40	B

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ATOM   1772  CB   ASP B  43      28.332  -8.298   7.508  1.00 29.57      B
ATOM   1773  CG   ASP B  43      27.587  -7.006   7.766  1.00 32.71      B
ATOM   1774  OD1  ASP B  43      26.999  -6.868   8.862  1.00 33.94      B
ATOM   1775  OD2  ASP B  43      27.593  -6.120   6.881  1.00 33.98      B
ATOM   1776  C    ASP B  43      28.036 -10.762   7.782  1.00 29.46      B
ATOM   1777  O    ASP B  43      27.162 -11.150   7.009  1.00 30.77      B
ATOM   1778  N    VAL B  44      29.123 -11.471   8.068  1.00 27.98      B
ATOM   1779  CA   VAL B  44      29.365 -12.780   7.486  1.00 27.16      B
ATOM   1780  CB   VAL B  44      30.846 -12.939   7.075  1.00 27.32      B
ATOM   1781  CG1  VAL B  44      31.083 -14.323   6.488  1.00 24.09      B
ATOM   1782  CG2  VAL B  44      31.218 -11.857   6.073  1.00 24.66      B
ATOM   1783  C    VAL B  44      28.990 -13.867   8.490  1.00 28.43      B
ATOM   1784  O    VAL B  44      28.558 -14.948   8.108  1.00 29.45      B
ATOM   1785  N    GLY B  45      29.177 -13.590   9.774  1.00 28.05      B
ATOM   1786  CA   GLY B  45      28.794 -14.561  10.780  1.00 28.67      B
ATOM   1787  C    GLY B  45      29.758 -15.679  11.125  1.00 28.25      B
ATOM   1788  O    GLY B  45      29.458 -16.486  12.002  1.00 29.67      B
ATOM   1789  N    GLU B  46      30.895 -15.755  10.443  1.00 27.03      B
ATOM   1790  CA   GLU B  46      31.873 -16.787  10.757  1.00 29.26      B
ATOM   1791  CB   GLU B  46      31.571 -18.087  10.000  1.00 32.16      B
ATOM   1792  CG   GLU B  46      32.039 -18.121   8.554  1.00 37.36      B
ATOM   1793  CD   GLU B  46      31.752 -19.458   7.885  1.00 41.59      B
ATOM   1794  OE1  GLU B  46      32.163 -20.505   8.433  1.00 43.30      B
ATOM   1795  OE2  GLU B  46      31.116 -19.463   6.810  1.00 43.54      B
ATOM   1796  C    GLU B  46      33.272 -16.295  10.413  1.00 29.29      B
ATOM   1797  O    GLU B  46      33.432 -15.288   9.722  1.00 30.45      B
ATOM   1798  N    PHE B  47      34.281 -17.005  10.904  1.00 28.00      B
ATOM   1799  CA   PHE B  47      35.670 -16.650  10.651  1.00 28.10      B
ATOM   1800  CB   PHE B  47      36.594 -17.445  11.566  1.00 28.74      B
ATOM   1801  CG   PHE B  47      36.487 -17.067  13.016  1.00 30.23      B
ATOM   1802  CD1  PHE B  47      37.248 -16.023  13.535  1.00 28.96      B
ATOM   1803  CD2  PHE B  47      35.636 -17.768  13.870  1.00 30.80      B
ATOM   1804  CE1  PHE B  47      37.166 -15.683  14.888  1.00 31.59      B
ATOM   1805  CE2  PHE B  47      35.544 -17.435  15.229  1.00 31.97      B
ATOM   1806  CZ   PHE B  47      36.311 -16.392  15.737  1.00 30.36      B
ATOM   1807  C    PHE B  47      36.034 -16.948   9.211  1.00 28.71      B
ATOM   1808  O    PHE B  47      35.576 -17.937   8.640  1.00 28.03      B
ATOM   1809  N    ARG B  48      36.872 -16.091   8.637  1.00 27.96      B
ATOM   1810  CA   ARG B  48      37.327 -16.242   7.261  1.00 26.41      B
ATOM   1811  CB   ARG B  48      36.513 -15.341   6.326  1.00 26.57      B
ATOM   1812  CG   ARG B  48      35.068 -15.755   6.108  1.00 26.19      B
ATOM   1813  CD   ARG B  48      34.971 -17.079   5.352  1.00 24.98      B
ATOM   1814  NE   ARG B  48      33.579 -17.465   5.146  1.00 26.01      B
ATOM   1815  CZ   ARG B  48      32.755 -16.867   4.294  1.00 26.84      B
ATOM   1816  NH1  ARG B  48      33.181 -15.857   3.554  1.00 26.92      B
ATOM   1817  NH2  ARG B  48      31.492 -17.260   4.204  1.00 30.22      B
ATOM   1818  C    ARG B  48      38.799 -15.861   7.140  1.00 26.95      B
ATOM   1819  O    ARG B  48      39.255 -14.878   7.737  1.00 24.36      B
ATOM   1820  N    ALA B  49      39.542 -16.647   6.373  1.00 24.93      B
ATOM   1821  CA   ALA B  49      40.943 -16.349   6.143  1.00 26.58      B
ATOM   1822  CB   ALA B  49      41.709 -17.619   5.792  1.00 27.05      B
ATOM   1823  C    ALA B  49      40.927 -15.397   4.956  1.00 26.47      B
ATOM   1824  O    ALA B  49      40.210 -15.635   3.983  1.00 26.12      B
ATOM   1825  N    VAL B  50      41.674 -14.302   5.044  1.00 27.06      B
ATOM   1826  CA   VAL B  50      41.720 -13.357   3.936  1.00 26.50      B
ATOM   1827  CB   VAL B  50      41.790 -11.876   4.439  1.00 27.14      B
ATOM   1828  CG1  VAL B  50      42.327 -11.827   5.846  1.00 29.89      B
ATOM   1829  CG2  VAL B  50      42.628 -11.020   3.501  1.00 27.33      B
ATOM   1830  C    VAL B  50      42.891 -13.742   3.037  1.00 26.58      B
ATOM   1831  O    VAL B  50      42.914 -13.390   1.860  1.00 27.84      B
ATOM   1832  N    THR B  51      43.842 -14.489   3.598  1.00 26.61      B
ATOM   1833  CA   THR B  51      44.992 -15.011   2.846  1.00 28.59      B
ATOM   1834  CB   THR B  51      46.295 -14.193   3.056  1.00 28.25      B
ATOM   1835  OG1  THR B  51      46.828 -14.464   4.356  1.00 28.56      B
ATOM   1836  CG2  THR B  51      46.033 -12.699   2.899  1.00 27.40      B
ATOM   1837  C    THR B  51      45.256 -16.435   3.344  1.00 29.29      B
ATOM   1838  O    THR B  51      44.787 -16.818   4.418  1.00 30.16      B
ATOM   1839  N    LEU B  52      46.005 -17.217   2.575  1.00 30.64      B
ATOM   1840  CA   LEU B  52      46.309 -18.596   2.959  1.00 31.32      B
ATOM   1841  CB   LEU B  52      47.277 -19.237   1.963  1.00 32.19      B
ATOM   1842  CG   LEU B  52      46.706 -19.724   0.624  1.00 36.90      B
ATOM   1843  CD1  LEU B  52      47.836 -20.306  -0.216  1.00 35.68      B
ATOM   1844  CD2  LEU B  52      45.620 -20.775   0.861  1.00 35.34      B
ATOM   1845  C    LEU B  52      46.892 -18.724   4.359  1.00 31.57      B
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ATOM   1846  O    LEU B  52      46.570 -19.656   5.097  1.00 31.50       B
ATOM   1847  N    LEU B  53      47.753 -17.786   4.723  1.00 31.09       B
ATOM   1848  CA   LEU B  53      48.388 -17.815   6.029  1.00 30.93       B
ATOM   1849  CB   LEU B  53      49.160 -16.511   6.246  1.00 31.99       B
ATOM   1850  CG   LEU B  53      50.338 -16.532   7.221  1.00 35.20       B
ATOM   1851  CD1  LEU B  53      51.364 -17.559   6.763  1.00 35.92       B
ATOM   1852  CD2  LEU B  53      50.975 -15.148   7.284  1.00 34.96       B
ATOM   1853  C    LEU B  53      47.377 -18.017   7.160  1.00 29.90       B
ATOM   1854  O    LEU B  53      47.663 -18.709   8.138  1.00 30.68       B
ATOM   1855  N    GLY B  54      46.192 -17.430   7.015  1.00 28.63       B
ATOM   1856  CA   GLY B  54      45.181 -17.537   8.057  1.00 29.75       B
ATOM   1857  C    GLY B  54      44.140 -18.635   7.901  1.00 30.44       B
ATOM   1858  O    GLY B  54      43.146 -18.664   8.630  1.00 28.02       B
ATOM   1859  N    LEU B  55      44.364 -19.547   6.964  1.00 30.54·      B
ATOM   1860  CA   LEU B  55      43.417 -20.630   6.732  1.00 32.59       B
ATOM   1861  CB   LEU B  55      43.765 -21.344   5.422  1.00 35.94       B
ATOM   1862  CG   LEU B  55      42.776 -22.383   4.889  1.00 38.88       B
ATOM   1863  CD1  LEU B  55      41.355 -21.831   4.927  1.00 38.23       B
ATOM   1864  CD2  LEU B  55      43.173 -22.766   3.467  1.00 39.03       B
ATOM   1865  C    LEU B  55      43.330 -21.631   7.892  1.00 32.20       B
ATOM   1866  O    LEU B  55      42.235 -22.026   8.291  1.00 33.32       B
ATOM   1867  N    PRO B  56      44.478 -22.058   8.447  1.00 31.03       B
ATOM   1868  CD   PRO B  56      45.862 -21.802   8.009  1.00 30.17       B
ATOM   1869  CA   PRO B  56      44.451 -23.013   9.561  1.00 30.23       B
ATOM   1870  CB   PRO B  56      45.925 -23.148   9.931  1.00 30.27       B
ATOM   1871  CG   PRO B  56      46.609 -22.967   8.610  1.00 28.92       B
ATOM   1872  C    PRO B  56      43.613 -22.525  10.740  1.00 31.42       B
ATOM   1873  O    PRO B  56      42.730 -23.237  11.222  1.00 33.17       B
ATOM   1874  N    ALA B  57      43.893 -21.305  11.196  1.00 30.04       B
ATOM   1875  CA   ALA B  57      43.181 -20.719  12.322  1.00 28.60       B
ATOM   1876  CB   ALA B  57      43.818 -19.389  12.697  1.00 26.81       B
ATOM   1877  C    ALA B  57      41.695 -20.528  12.021  1.00 29.08       B
ATOM   1878  O    ALA B  57      40.847 -20.737  12.887  1.00 28.22       B
ATOM   1879  N    ALA B  58      41.385 -20.135  10.791  1.00 28.84       B
ATOM   1880  CA   ALA B  58      40.002 -19.922  10.386  1.00 31.06       B
ATOM   1881  CB   ALA B  58      39.955 -19.426   8.947  1.00 29.79       B
ATOM   1882  C    ALA B  58      39.169 -21.199  10.529  1.00 32.38       B
ATOM   1883  O    ALA B  58      38.113 -21.197  11.170  1.00 31.57.      B
ATOM   1884  N    GLU B  59      39.647 -22.285   9.929  1.00 33.50       B
ATOM   1885  CA   GLU B  59      38.949 -23.565   9.993  1.00 33.91       B
ATOM   1886  CB   GLU B  59      39.706 -24.622   9.195  1.00 35.67       B
ATOM   1887  CG   GLU B  59      39.619 -24.457   7.696  1.00 39.73       B
ATOM   1888  CD   GLU B  59      40.327 -25.583   6.957  1.00 43.58       B
ATOM   1889  OE1  GLU B  59      41.561 -25.715   7.119  1.00 44.52       B
ATOM   1890  OE2  GLU B  59      39.648 -26.337   6.222  1.00 44.30       B
ATOM   1891  C    GLU B  59      38.771 -24.063  11.425  1.00 33.56       B
ATOM   1892  O    GLU B  59      37.708 -24.570  11.790  1.00 34.40       B
ATOM   1893  N    TYR B  60      39.815 -23.923  12.233  1.00 31.99       B
ATOM   1894  CA   TYR B  60      39.754 -24.369  13.611  1.00 31.01       B
ATOM   1895  CB   TYR B  60      41.112 -24.202  14.292  1.00 31.13       B
ATOM   1896  CG   TYR B  60      41.051 -24.548  15.750  1.00 30.99       B
ATOM   1897  CD1  TYR B  60      40.919 -25.871  16.162  1.00 32.55       B
ATOM   1898  CE1  TYR B  60      40.770 -26.192  17.508  1.00 35.39       B
ATOM   1899  CD2  TYR B  60      41.039 -23.550  16.716  1.00 32.67       B
ATOM   1900  CE2  TYR B  60      40.890 -23.853  18.064  1.00 35.14       B
ATOM   1901  CZ   TYR B  60      40.756 -25.177  18.455  1.00 36.91       B
ATOM   1902  OH   TYR B  60      40.606 -25.483  19.791  1.00 40.06       B
ATOM   1903  C    TYR B  60      38.695 -23.631  14.426  1.00 31.72       B
ATOM   1904  O    TYR B  60      37.840 -24.258  15.050  1.00 31.72       B
ATOM   1905  N    TRP B  61      38.752 -22.303  14.428  1.00 30.37       B
ATOM   1906  CA   TRP B  61      37.790 -21.525  15.194  1.00 31.57       B
ATOM   1907  CB   TRP B  61      38.129 -20.024  15.140  1.00 32.14       B
ATOM   1908  CG   TRP B  61      39.430 -19.666  15.824  1.00 33.73       B
ATOM   1909  CD2  TRP B  61      40.359 -18.648  15.429  1.00 35.16       B
ATOM   1910  CE2  TRP B  61      41.418 -18.662  16.362  1.00 35.99       B
ATOM   1911  CE3  TRP B  61      40.397 -17.719  14.378  1.00 38.30       B
ATOM   1912  CD1  TRP B  61      39.949 -20.236  16.949  1.00 33.63       B
ATOM   1913  NE1  TRP B  61      41.142 -19.642  17.278  1.00 33.97       B
ATOM   1914  CZ2  TRP B  61      42.512 -17.782  16.277  1.00 38.13       B
ATOM   1915  CZ3  TRP B  61      41.487 -16.836  14.293  1.00 39.26       B
ATOM   1916  CH2  TRP B  61      42.527 -16.879  15.240  1.00 38.22       B
ATOM   1917  C    TRP B  61      36.349 -21.758  14.739  1.00 31.22       B
ATOM   1918  O    TRP B  61      35.436 -21.758  15.559  1.00 29.98       B
ATOM   1919  N    ASN B  62      36.137 -21.955  13.440  1.00 31.63       B
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ATOM	1920	CA	ASN	B	62	34.781	-22.191	12.950	1.00	32.57	B
ATOM	1921	CB	ASN	B	62	34.701	-22.021	11.434	1.00	30.37	B
ATOM	1922	CG	ASN	B	62	34.575	-20.574	11.025	1.00	29.69	B
ATOM	1923	OD1	ASN	B	62	33.889	-19.794	11.680	1.00	29.42	B
ATOM	1924	ND2	ASN	B	62	35.222	-20.209	9.926	1.00	31.50	B
ATOM	1925	C	ASN	B	62	34.238	-23.561	13.339	1.00	32.87	B
ATOM	1926	O	ASN	B	62	33.028	-23.789	13.292	1.00	34.70	B
ATOM	1927	N	SER	B	63	35.128	-24.469	13.725	1.00	32.43	B
ATOM	1928	CA	SER	B	63	34.705	-25.797	14.140	1.00	32.38	B
ATOM	1929	CB	SER	B	63	35.818	-26.819	13.879	1.00	32.20	B
ATOM	1930	OG	SER	B	63	36.905	-26.626	14.760	1.00	33.33	B
ATOM	1931	C	SER	B	63	34.348	-25.768	15.630	1.00	32.14	B
ATOM	1932	O	SER	B	63	33.677	-26.667	16.138	1.00	32.86	B
ATOM	1933	N	GLN	B	64	34.794	-24.724	16.325	1.00	31.10	B
ATOM	1934	CA	GLN	B	64	34.513	-24.569	17.752	1.00	30.99	B
ATOM	1935	CB	GLN	B	64	35.661	-23.837	18.446	1.00	32.54	B
ATOM	1936	CG	GLN	B	64	36.988	-24.557	18.383	1.00	34.49	B
ATOM	1937	CD	GLN	B	64	36.870	-25.998	18.810	1.00	38.20	B
ATOM	1938	OE1	GLN	B	64	36.629	-26.884	17.984	1.00	40.82	B
ATOM	1939	NE2	GLN	B	64	37.022	-26.245	20.108	1.00	38.34	B
ATOM	1940	C	GLN	B	64	33.226	-23.775	17.944	1.00	29.88	B
ATOM	1941	O	GLN	B	64	33.252	-22.549	18.064	1.00	29.28	B
ATOM	1942	N	LYS	B	65	32.101	-24.476	17.979	1.00	28.74	B
ATOM	1943	CA	LYS	B	65	30.815	-23.812	18.123	1.00	29.18	B
ATOM	1944	CB	LYS	B	65	29.688	-24.851	18.132	1.00	30.63	B
ATOM	1945	CG	LYS	B	65	29.575	-25.612	16.812	1.00	32.20	B
ATOM	1946	CD	LYS	B	65	29.371	-24.654	15.629	1.00	34.44	B
ATOM	1947	CE	LYS	B	65	29.688	-25.327	14.284	1.00	37.24	B
ATOM	1948	NZ	LYS	B	65	29.430	-24.427	13.109	1.00	37.89	B
ATOM	1949	C	LYS	B	65	30.745	-22.919	19.352	1.00	28.19	B
ATOM	1950	O	LYS	B	65	30.075	-21.891	19.333	1.00	28.16	B
ATOM	1951	N	ASP	B	66	31.440	-23.304	20.417	1.00	27.58	B
ATOM	1952	CA	ASP	B	66	31.460	-22.504	21.636	1.00	27.41	B
ATOM	1953	CB	ASP	B	66	32.283	-23.208	22.727	1.00	28.45	B
ATOM	1954	CG	ASP	B	66	33.559	-23.847	22.184	1.00	32.24	B
ATOM	1955	OD1	ASP	B	66	33.478	-24.591	21.183	1.00	33.17	B
ATOM	1956	OD2	ASP	B	66	34.642	-23.623	22.765	1.00	33.25	B
ATOM	1957	C	ASP	B	66	32.050	-21.131	21.316	1.00	26.63	B
ATOM	1958	O	ASP	B	66	31.468	-20.102	21.662	1.00	24.32	B
ATOM	1959	N	ILE	B	67	33.198	-21.116	20.640	1.00	26.12	B
ATOM	1960	CA	ILE	B	67	33.840	-19.855	20.273	1.00	26.42	B
ATOM	1961	CB	ILE	B	67	35.206	-20.088	19.613	1.00	28.29	B
ATOM	1962	CG2	ILE	B	67	35.859	-18.753	19.290	1.00	28.54	B
ATOM	1963	CG1	ILE	B	67	36.094	-20.925	20.535	1.00	28.25	B
ATOM	1964	CD1	ILE	B	67	36.319	-20.321	21.906	1.00	32.66	B
ATOM	1965	C	ILE	B	67	32.968	-19.061	19.300	1.00	26.36	B
ATOM	1966	O	ILE	B	67	32.747	-17.869	19.491	1.00	25.33	B
ATOM	1967	N	LEU	B	68	32.472	-19.730	18.261	1.00	26.11	B
ATOM	1968	CA	LEU	B	68	31.617	-19.086	17.267	1.00	26.66	B
ATOM	1969	CB	LEU	B	68	31.132	-20.102	16.235	1.00	27.61	B
ATOM	1970	CG	LEU	B	68	31.807	-20.171	14.872	1.00	30.12	B
ATOM	1971	CD1	LEU	B	68	31.081	-21.216	14.031	1.00	33.09	B
ATOM	1972	CD2	LEU	B	68	31.766	-18.812	14.190	1.00	30.01	B
ATOM	1973	C	LEU	B	68	30.394	-18.415	17.878	1.00	26.81	B
ATOM	1974	O	LEU	B	68	30.067	-17.280	17.541	1.00	26.19	B
ATOM	1975	N	GLU	B	69	29.706	-19.135	18.756	1.00	28.87	B
ATOM	1976	CA	GLU	B	69	28.509	-18.614	19.404	1.00	31.55	B
ATOM	1977	CB	GLU	B	69	27.945	-19.654	20.382	1.00	35.75	B
ATOM	1978	CG	GLU	B	69	27.304	-20.862	19.695	1.00	43.71	B
ATOM	1979	CD	GLU	B	69	26.883	-21.954	20.673	1.00	47.92	B
ATOM	1980	OE1	GLU	B	69	27.756	-22.454	21.418	1.00	49.27	B
ATOM	1981	OE2	GLU	B	69	25.683	-22.316	20.694	1.00	50.44	B
ATOM	1982	C	GLU	B	69	28.773	-17.295	20.130	1.00	29.82	B
ATOM	1983	O	GLU	B	69	27.986	-16.356	20.027	1.00	27.91	B
ATOM	1984	N	ARG	B	70	29.886	-17.226	20.855	1.00	29.32	B
ATOM	1985	CA	ARG	B	70	30.239	-16.016	21.597	1.00	28.97	B
ATOM	1986	CB	ARG	B	70	31.347	-16.315	22.606	1.00	28.94	B
ATOM	1987	CG	ARG	B	70	30.982	-17.344	23.673	1.00	30.55	B
ATOM	1988	CD	ARG	B	70	32.251	-17.810	24.371	1.00	32.35	B
ATOM	1989	NE	ARG	B	70	32.040	-19.037	25.117	1.00	34.83	B
ATOM	1990	CZ	ARG	B	70	32.946	-19.997	25.232	1.00	34.98	B
ATOM	1991	NH1	ARG	B	70	34.131	-19.875	24.647	1.00	35.03	B
ATOM	1992	NH2	ARG	B	70	32.662	-21.083	25.930	1.00	39.48	B
ATOM	1993	C	ARG	B	70	30.691	-14.888	20.682	1.00	26.77	B

ATOM	1994	O	ARG	B	70	30.412	-13.725	20.951	1.00 26.95	B
ATOM	1995	N	LYS	B	71	31.395	-15.235	19.608	1.00 25.97	B
ATOM	1996	CA	LYS	B	71	31.885	-14.236	18.670	1.00 25.98	B
ATOM	1997	CB	LYS	B	71	32.830	-14.877	17.652	1.00 27.62	B
ATOM	1998	CG	LYS	B	71	33.728	-13.873	16.924	1.00 29.24	B
ATOM	1999	CD	LYS	B	71	34.628	-13.137	17.909	1.00 32.14	B
ATOM	2000	CE	LYS	B	71	35.430	-12.035	17.236	1.00 33.13	B
ATOM	2001	NZ	LYS	B	71	36.093	-11.164	18.245	1.00 34.18	B
ATOM	2002	C	LYS	B	71	30.710	-13.591	17.952	1.00 25.22	B
ATOM	2003	O	LYS	B	71	30.719	-12.395	17.671	1.00 24.39	B
ATOM	2004	N	ARG	B	72	29.701	-14.399	17.657	1.00 25.08	B
ATOM	2005	CA	ARG	B	72	28.500	-13.922	16.989	1.00 26.32	B
ATOM	2006	CB	ARG	B	72	27.628	-15.101	16.561	1.00 28.02	B
ATOM	2007	CG	ARG	B	72	28.116	-15.830	15.340	1.00 28.10	B
ATOM	2008	CD	ARG	B	72	27.225	-17.013	15.083	1.00 32.02	B
ATOM	2009	NE	ARG	B	72	27.451	-17.583	13.766	1.00 36.46	B
ATOM	2010	CZ	ARG	B	72	27.014	-18.779	13.389	1.00 38.62	B
ATOM	2011	NH1	ARG	B	72	26.324	-19.538	14.238	1.00 37.88	B
ATOM	2012	NH2	ARG	B	72	27.270	-19.212	12.163	1.00 38.55	B
ATOM	2013	C	ARG	B	72	27.687	-13.017	17.898	1.00 24.31	B
ATOM	2014	O	ARG	B	72	26.792	-12.326	17.439	1.00 24.84	B
ATOM	2015	N	ALA	B	73	27.990	-13.028	19.189	1.00 26.18	B
ATOM	2016	CA	ALA	B	73	27.267	-12.185	20.140	1.00 28.18	B
ATOM	2017	CB	ALA	B	73	26.973	-12.974	21.418	1.00 28.97	B
ATOM	2018	C	ALA	B	73	28.056	-10.916	20.472	1.00 28.97	B
ATOM	2019	O	ALA	B	73	27.528	-9.977	21.066	1.00 30.50	B
ATOM	2020	N	ALA	B	74	29.320	-10.882	20.070	1.00 29.65	B
ATOM	2021	CA	ALA	B	74	30.170	-9.732	20.347	1.00 30.77	B
ATOM	2022	CB	ALA	B	74	31.558	-9.966	19.764	1.00 30.77	B
ATOM	2023	C	ALA	B	74	29.594	-8.414	19.827	1.00 31.78	B
ATOM	2024	O	ALA	B	74	29.789	-7.359	20.438	1.00 32.74	B
ATOM	2025	N	VAL	B	75	28.886	-8.465	18.704	1.00 31.60	B
ATOM	2026	CA	VAL	B	75	28.308	-7.248	18.145	1.00 32.38	B
ATOM	2027	CB	VAL	B	75	27.397	-7.539	16.929	1.00 30.51	B
ATOM	2028	CG1	VAL	B	75	27.291	-6.295	16.062	1.00 31.44	B
ATOM	2029	CG2	VAL	B	75	27.931	-8.696	16.137	1.00 33.08	B
ATOM	2030	C	VAL	B	75	27.465	-6.529	19.201	1.00 33.07	B
ATOM	2031	O	VAL	B	75	27.402	-5.302	19.218	1.00 33.54	B
ATOM	2032	N	ASP	B	76	26.811	-7.302	20.065	1.00 34.70	B
ATOM	2033	CA	ASP	B	76	25.971	-6.748	21.130	1.00 36.27	B
ATOM	2034	CB	ASP	B	76	24.780	-7.670	21.420	1.00 38.57	B
ATOM	2035	CG	ASP	B	76	23.889	-7.881	20.215	1.00 41.48	B
ATOM	2036	OD1	ASP	B	76	23.335	-6.887	19.694	1.00 43.46	B
ATOM	2037	OD2	ASP	B	76	23.739	-9.048	19.792	1.00 43.76	B
ATOM	2038	C	ASP	B	76	26.780	-6.600	22.411	1.00 35.56	B
ATOM	2039	O	ASP	B	76	26.731	-5.569	23.081	1.00 34.13	B
ATOM	2040	N	ARG	B	77	27.508	-7.661	22.744	1.00 35.22	B
ATOM	2041	CA	ARG	B	77	28.343	-7.708	23.937	1.00 34.49	B
ATOM	2042	CB	ARG	B	77	29.071	-9.052	23.991	1.00 37.16	B
ATOM	2043	CG	ARG	B	77	29.841	-9.328	25.271	1.00 40.90	B
ATOM	2044	CD	ARG	B	77	30.735	-10.553	25.102	1.00 43.79	B
ATOM	2045	NE	ARG	B	77	30.004	-11.743	24.665	1.00 48.65	B
ATOM	2046	CZ	ARG	B	77	29.103	-12.385	25.406	1.00 51.36	B
ATOM	2047	NH1	ARG	B	77	28.816	-11.949	26.626	1.00 52.34	B
ATOM	2048	NH2	ARG	B	77	28.499	-13.470	24.935	1.00 50.76	B
ATOM	2049	C	ARG	B	77	29.362	-6.576	23.927	1.00 32.18	B
ATOM	2050	O	ARG	B	77	29.499	-5.835	24.896	1.00 32.49	B
ATOM	2051	N	VAL	B	78	30.073	-6.442	22.818	1.00 30.66	B
ATOM	2052	CA	VAL	B	78	31.086	-5.414	22.707	1.00 29.00	B
ATOM	2053	CB	VAL	B	78	32.276	-5.917	21.867	1.00 27.82	B
ATOM	2054	CG1	VAL	B	78	33.327	-4.815	21.740	1.00 25.08	B
ATOM	2055	CG2	VAL	B	78	32.870	-7.160	22.504	1.00 23.27	B
ATOM	2056	C	VAL	B	78	30.594	-4.093	22.113	1.00 29.33	B
ATOM	2057	O	VAL	B	78	30.435	-3.104	22.831	1.00 29.83	B
ATOM	2058	N	CYS	B	79	30.354	-4.091	20.804	1.00 28.42	B
ATOM	2059	CA	CYS	B	79	29.927	-2.891	20.083	1.00 29.14	B
ATOM	2060	C	CYS	B	79	28.724	-2.107	20.629	1.00 28.59	B
ATOM	2061	O	CYS	B	79	28.883	-0.961	21.062	1.00 26.06	B
ATOM	2062	CB	CYS	B	79	29.675	-3.219	18.604	1.00 29.19	B
ATOM	2063	SG	CYS	B	79	31.052	-3.983	17.680	1.00 31.71	B
ATOM	2064	N	ARG	B	80	27.527	-2.693	20.586	1.00 28.34	B
ATOM	2065	CA	ARG	B	80	26.347	-1.980	21.071	1.00 30.77	B
ATOM	2066	CB	ARG	B	80	25.079	-2.828	20.915	1.00 32.82	B
ATOM	2067	CG	ARG	B	80	24.612	-2.973	19.474	1.00 35.65	B

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ATOM	2068	CD	ARG	B	80	23.120	-3.273	19.387	1.00	36.01	B
ATOM	2069	NE	ARG	B	80	22.649	-3.243	18.005	1.00	35.49	B
ATOM	2070	CZ	ARG	B	80	22.913	-4.188	17.108	1.00	37.80	B
ATOM	2071	NH1	ARG	B	80	23.640	-5.242	17.449	1.00	40.57	B
ATOM	2072	NH2	ARG	B	80	22.467	-4.075	15.864	1.00	38.86	B
ATOM	2073	C	ARG	B	80	26.507	-1.552	22.524	1.00	31.24	B
ATOM	2074	O	ARG	B	80	25.975	-0.525	22.944	1.00	32.07	B
ATOM	2075	N	HIS	B	81	27.257	-2.337	23.283	1.00	31.40	B
ATOM	2076	CA	HIS	B	81	27.492	-2.028	24.683	1.00	32.20	B
ATOM	2077	CB	HIS	B	81	28.220	-3.185	25.366	1.00	33.00	B
ATOM	2078	CG	HIS	B	81	28.595	-2.899	26.787	1.00	37.24	B
ATOM	2079	CD2	HIS	B	81	29.764	-2.490	27.335	1.00	38.05	B
ATOM	2080	ND1	HIS	B	81	27.692	-2.981	27.826	1.00	39.11	B
ATOM	2081	CE1	HIS	B	81	28.290	-2.635	28.952	1.00	40.49	B
ATOM	2082	NE2	HIS	B	81	29.548	-2.332	28.682	1.00	39.16	B
ATOM	2083	C	HIS	B	81	28.326	-0.762	24.831	1.00	30.87	B
ATOM	2084	O	HIS	B	81	27.906	0.206	25.470	1.00	31.38	B
ATOM	2085	N	ASN	B	82	29.511	-0.770	24.233	1.00	29.77	B
ATOM	2086	CA	ASN	B	82	30.403	0.375	24.332	1.00	28.02	B
ATOM	2087	CB	ASN	B	82	31.755	0.056	23.683	1.00	26.64	B
ATOM	2088	CG	ASN	B	82	32.470	-1.092	24.373	1.00	25.02	B
ATOM	2089	OD1	ASN	B	82	32.305	-1.305	25.572	1.00	24.06	B
ATOM	2090	ND2	ASN	B	82	33.278	-1.829	23.619	1.00	26.38	B
ATOM	2091	C	ASN	B	82	29.819	1.648	23.741	1.00	26.04	B
ATOM	2092	O	ASN	B	82	30.163	2.747	24.174	1.00	25.71	B
ATOM	2093	N	TYR	B	83	28.930	1.512	22.765	1.00	25.90	B
ATOM	2094	CA	TYR	B	83	28.324	2.693	22.156	1.00	25.91	B
ATOM	2095	CB	TYR	B	83	27.462	2.297	20.946	1.00	25.69	B
ATOM	2096	CG	TYR	B	83	27.102	3.462	20.056	1.00	25.95	B
ATOM	2097	CD1	TYR	B	83	26.022	4.294	20.353	1.00	27.11	B
ATOM	2098	CE1	TYR	B	83	25.712	5.403	19.545	1.00	25.98	B
ATOM	2099	CD2	TYR	B	83	27.865	3.759	18.933	1.00	27.72	B
ATOM	2100	CE2	TYR	B	83	27.567	4.862	18.121	1.00	28.05	B
ATOM	2101	CZ	TYR	B	83	26.493	5.680	18.434	1.00	27.73	B
ATOM	2102	OH	TYR	B	83	26.225	6.781	17.645	1.00	27.55	B
ATOM	2103	C	TYR	B	83	27.485	3.458	23.181	1.00	25.87	B
ATOM	2104	O	TYR	B	83	27.315	4.673	23.070	1.00	26.05	B
ATOM	2105	N	GLN	B	84	26.975	2.750	24.186	1.00	28.25	B
ATOM	2106	CA	GLN	B	84	26.159	3.375	25.229	1.00	30.44	B
ATOM	2107	CB	GLN	B	84	25.467	2.310	26.093	1.00	34.30	B
ATOM	2108	CG	GLN	B	84	24.595	1.343	25.301	1.00	40.52	B
ATOM	2109	CD	GLN	B	84	23.515	2.047	24.496	1.00	43.21	B
ATOM	2110	OE1	GLN	B	84	23.023	1.516	23.499	1.00	46.12	B
ATOM	2111	NE2	GLN	B	84	23.133	3.244	24.932	1.00	45.41	B
ATOM	2112	C	GLN	B	84	27.030	4.254	26.111	1.00	29.01	B
ATOM	2113	O	GLN	B	84	26.633	5.353	26.494	1.00	27.82	B
ATOM	2114	N	LEU	B	85	28.219	3.757	26.436	1.00	28.32	B
ATOM	2115	CA	LEU	B	85	29.150	4.505	27.263	1.00	28.76	B
ATOM	2116	CB	LEU	B	85	30.355	3.631	27.631	1.00	28.92	B
ATOM	2117	CG	LEU	B	85	30.065	2.226	28.184	1.00	30.98	B
ATOM	2118	CD1	LEU	B	85	31.343	1.631	28.758	1.00	30.59	B
ATOM	2119	CD2	LEU	B	85	29.006	2.291	29.265	1.00	31.87	B
ATOM	2120	C	LEU	B	85	29.609	5.719	26.461	1.00	29.95	B
ATOM	2121	O	LEU	B	85	29.836	6.798	27.010	1.00	30.93	B
ATOM	2122	N	GLU	B	86	29.724	5.529	25.150	1.00	30.31	B
ATOM	2123	CA	GLU	B	86	30.160	6.577	24.245	1.00	31.41	B
ATOM	2124	CB	GLU	B	86	30.426	5.981	22.861	1.00	32.60	B
ATOM	2125	CG	GLU	B	86	31.741	6.420	22.236	1.00	39.25	B
ATOM	2126	CD	GLU	B	86	32.962	5.854	22.953	1.00	41.02	B
ATOM	2127	OE1	GLU	B	86	33.379	4.714	22.636	1.00	40.75	B
ATOM	2128	OE2	GLU	B	86	33.497	6.553	23.843	1.00	41.96	B
ATOM	2129	C	GLU	B	86	29.113	7.684	24.146	1.00	32.44	B
ATOM	2130	O	GLU	B	86	29.454	8.865	24.109	1.00	30.73	B
ATOM	2131	N	LEU	B	87	27.838	7.303	24.103	1.00	33.77	B
ATOM	2132	CA	LEU	B	87	26.755	8.282	24.015	1.00	34.65	B
ATOM	2133	CB	LEU	B	87	25.398	7.583	23.899	1.00	34.69	B
ATOM	2134	CG	LEU	B	87	24.916	7.169	22.508	1.00	36.86	B
ATOM	2135	CD1	LEU	B	87	23.655	6.326	22.642	1.00	35.43	B
ATOM	2136	CD2	LEU	B	87	24.645	8.411	21.660	1.00	35.76	B
ATOM	2137	C	LEU	B	87	26.740	9.199	25.231	1.00	35.16	B
ATOM	2138	O	LEU	B	87	26.250	10.326	25.164	1.00	34.29	B
ATOM	2139	N	ARG	B	88	27.280	8.711	26.343	1.00	36.69	B
ATOM	2140	CA	ARG	B	88	27.317	9.493	27.573	1.00	37.64	B
ATOM	2141	CB	ARG	B	88	27.173	8.575	28.791	1.00	39.79	B

ATOM	2142	CG	ARG B	88	25.827	7.878	28.908	1.00	45.19	B
ATOM	2143	CD	ARG B	88	25.704	7.173	30.253	1.00	49.04	B
ATOM	2144	NE	ARG B	88	26.657	6.074	30.388	1.00	54.57	B
ATOM	2145	CZ	ARG B	88	27.101	5.603	31.552	1.00	55.76	B
ATOM	2146	NH1	ARG B	88	26.683	6.137	32.694	1.00	55.56	B
ATOM	2147	NH2	ARG B	88	27.963	4.595	31.574	1.00	56.11	B
ATOM	2148	C	ARG B	88	28.601	10.299	27.714	1.00	36.93	B
ATOM	2149	O	ARG B	88	28.702	11.160	28.589	1.00	37.24	B
ATOM	2150	N	THR B	89	29.571	10.035	26.842	1.00	35.19	B
ATOM	2151	CA	THR B	89	30.860	10.712	26.914	1.00	31.71	B
ATOM	2152	CB	THR B	89	31.916	9.767	27.529	1.00	31.61	B
ATOM	2153	OG1	THR B	89	31.980	8.554	26.762	1.00	29.72	B
ATOM	2154	CG2	THR B	89	31.557	9.436	28.963	1.00	25.87	B
ATOM	2155	C	THR B	89	31.420	11.254	25.600	1.00	31.31	B
ATOM	2156	O	THR B	89	31.214	12.415	25.249	1.00	32.41	B
ATOM	2157	N	THR B	90	32.139	10.403	24.880	1.00	30.72	B
ATOM	2158	CA	THR B	90	32.766	10.786	23.623	1.00	30.43	B
ATOM	2159	CB	THR B	90	33.368	9.558	22.925	1.00	30.54	B
ATOM	2160	OG1	THR B	90	34.297	8.919	23.808	1.00	33.70	B
ATOM	2161	CG2	THR B	90	34.099	9.970	21.666	1.00	31.65	B
ATOM	2162	C	THR B	90	31.874	11.512	22.625	1.00	30.61	B
ATOM	2163	O	THR B	90	32.267	12.543	22.070	1.00	30.24	B
ATOM	2164	N	LEU B	91	30.683	10.977	22.385	1.00	30.30	B
ATOM	2165	CA	LEU B	91	29.767	11.581	21.425	1.00	31.93	B
ATOM	2166	CB	LEU B	91	28.709	10.554	21.007	1.00	32.55	B
ATOM	2167	CG	LEU B	91	29.268	9.315	20.292	1.00	33.01	B
ATOM	2168	CD1	LEU B	91	28.201	8.233	20.205	1.00	33.73	B
ATOM	2169	CD2	LEU B	91	29.761	9.700	18.902	1.00	31.26	B
ATOM	2170	C	LEU B	91	29.096	12.872	21.907	1.00	32.38	B
ATOM	2171	O	LEU B	91	28.402	13.534	21.139	1.00	32.08	B
ATOM	2172	N	GLN B	92	29.303	13.229	23.173	1.00	32.44	B
ATOM	2173	CA	GLN B	92	28.725	14.454	23.713	1.00	34.54	B
ATOM	2174	CB	GLN B	92	28.138	14.217	25.110	1.00	38.48	B
ATOM	2175	CG	GLN B	92	26.836	13.419	25.121	1.00	44.66	B
ATOM	2176	CD	GLN B	92	26.233	13.291	26.516	1.00	49.27	B
ATOM	2177	OE1	GLN B	92	25.239	12.588	26.712	1.00	51.65	B
ATOM	2178	NE2	GLN B	92	26.832	13.975	27.491	1.00	49.93	B
ATOM	2179	C	GLN B	92	29.779	15.557	23.777	1.00	32.86	B
ATOM	2180	O	GLN B	92	29.457	16.721	24.019	1.00	32.19	B
ATOM	2181	N	ARG B	93	31.038	15.187	23.555	1.00	31.53	B
ATOM	2182	CA	ARG B	93	32.132	16.157	23.576	1.00	29.87	B
ATOM	2183	CB	ARG B	93	33.477	15.472	23.302	1.00	28.14	B
ATOM	2184	CG	ARG B	93	34.681	16.433	23.217	1.00	23.56	B
ATOM	2185	CD	ARG B	93	35.953	15.656	22.925	1.00	22.53	B
ATOM	2186	NE	ARG B	93	37.128	16.486	22.662	1.00	19.19	B
ATOM	2187	CZ	ARG B	93	37.769	17.205	23.581	1.00	18.66	B
ATOM	2188	NH1	ARG B	93	37.352	17.214	24.843	1.00	17.45	B
ATOM	2189	NH2	ARG B	93	38.847	17.898	23.242	1.00	16.56	B
ATOM	2190	C	ARG B	93	31.921	17.245	22.535	1.00	29.02	B
ATOM	2191	O	ARG B	93	31.755	16.965	21.349	1.00	29.55	B
ATOM	2192	N	ARG B	94	31.933	18.490	22.987	1.00	28.71	B
ATOM	2193	CA	ARG B	94	31.767	19.613	22.087	1.00	29.63	B
ATOM	2194	CB	ARG B	94	30.299	20.046	22.041	1.00	32.44	B
ATOM	2195	CG	ARG B	94	29.506	19.196	21.060	1.00	37.10	B
ATOM	2196	CD	ARG B	94	28.016	19.414	21.124	1.00	39.80	B
ATOM	2197	NE	ARG B	94	27.350	18.742	20.008	1.00	44.04	B
ATOM	2198	CZ	ARG B	94	27.372	17.428	19.791	1.00	44.11	B
ATOM	2199	NH1	ARG B	94	28.026	16.625	20.617	1.00	45.60	B
ATOM	2200	NH2	ARG B	94	26.747	16.916	18.739	1.00	44.45	B
ATOM	2201	C	ARG B	94	32.656	20.760	22.498	1.00	28.84	B
ATOM	2202	O	ARG B	94	32.464	21.363	23.550	1.00	29.13	B
ATOM	2203	N	VAL B	95	33.650	21.038	21.663	1.00	27.49	B
ATOM	2204	CA	VAL B	95	34.592	22.117	21.916	1.00	26.47	B
ATOM	2205	CB	VAL B	95	36.047	21.605	21.890	1.00	25.65	B
ATOM	2206	CG1	VAL B	95	37.004	22.734	22.260	1.00	22.82	B
ATOM	2207	CG2	VAL B	95	36.202	20.423	22.849	1.00	26.01	B
ATOM	2208	C	VAL B	95	34.415	23.180	20.840	1.00	27.00	B
ATOM	2209	O	VAL B	95	34.721	22.945	19.665	1.00	27.00	B
ATOM	2210	N	GLU B	96	33.912	24.340	21.253	1.00	26.94	B
ATOM	2211	CA	GLU B	96	33.673	25.462	20.348	1.00	26.50	B
ATOM	2212	CB	GLU B	96	33.072	26.649	21.107	1.00	29.19	B
ATOM	2213	CG	GLU B	96	31.736	26.372	21.775	1.00	36.47	B
ATOM	2214	CD	GLU B	96	31.211	27.582	22.537	1.00	40.45	B
ATOM	2215	OE1	GLU B	96	30.121	27.477	23.144	1.00	42.85	B

ATOM	2216	OE2	GLU B	96	31.891	28.634	22.526	1.00	40.11	B
ATOM	2217	C	GLU B	96	34.960	25.916	19.689	1.00	25.02	B
ATOM	2218	O	GLU B	96	35.999	26.022	20.338	1.00	24.73	B
ATOM	2219	N	PRO B	97	34.900	26.204	18.383	1.00	24.54	B
ATOM	2220	CD	PRO B	97	33.744	26.011	17.493	1.00	22.89	B
ATOM	2221	CA	PRO B	97	36.069	26.655	17.626	1.00	23.87	B
ATOM	2222	CB	PRO B	97	35.580	26.633	16.175	1.00	22.81	B
ATOM	2223	CG	PRO B	97	34.411	25.663	16.202	1.00	25.55	B
ATOM	2224	C	PRO B	97	36.498	28.061	18.021	1.00	23.80	B
ATOM	2225	O	PRO B	97	35.665	28.905	18.353	1.00	24.40	B
ATOM	2226	N	THR B	98	37.799	28.307	17.990	1.00	22.02	B
ATOM	2227	CA	THR B	98	38.306	29.634	18.266	1.00	24.00	B
ATOM	2228	CB	THR B	98	39.569	29.592	19.150	1.00	27.31	B
ATOM	2229	OG1	THR B	98	40.626	28.929	18.449	1.00	35.69	B
ATOM	2230	CG2	THR B	98	39.282	28.839	20.439	1.00	26.76	B
ATOM	2231	C	THR B	98	38.631	30.143	16.860	1.00	22.38	B
ATOM	2232	O	THR B	98	39.376	29.504	16.116	1.00	19.48	B
ATOM	2233	N	VAL B	99	38.041	31.274	16.487	1.00	21.55	B
ATOM	2234	CA	VAL B	99	38.242	31.824	15.152	1.00	21.20	B
ATOM	2235	CB	VAL B	99	36.871	32.153	14.509	1.00	21.09	B
ATOM	2236	CG1	VAL B	99	37.043	32.541	13.050	1.00	19.62	B
ATOM	2237	CG2	VAL B	99	35.950	30.944	14.625	1.00	18.29	B
ATOM	2238	C	VAL B	99	39.140	33.059	15.167	1.00	21.59	B
ATOM	2239	O	VAL B	99	38.970	33.962	15.982	1.00	21.57	B
ATOM	2240	N	THR B	100	40.099	33.084	14.252	1.00	22.65	B
ATOM	2241	CA	THR B	100	41.056	34.179	14.168	1.00	24.95	B
ATOM	2242	CB	THR B	100	42.399	33.770	14.820	1.00	26.31	B
ATOM	2243	OG1	THR B	100·	42.162	33.321	16.160	1.00	30.10	B
ATOM	2244	CG2	THR B	100	43.359	34.942	14.854	1.00	29.07	B
ATOM	2245	C	THR B	100	41.329	34.556	12.717	1.00	24.61	B
ATOM	2246	O	THR B	100	41.514	33.689	11.869	1.00	23.89	B
ATOM	2247	N	ILE B	101	41.363	35.852	12.435	1.00	26.18	B
ATOM	2248	CA	ILE B	101	41.638	36.315	11.080	1.00	29.32	B
ATOM	2249	CB	ILE B	101	40.572	37.327	10.582	1.00	29.37	B
ATOM	2250	CG2	ILE B	101	40.986	37.885	9.231	1.00	29.49	B
ATOM	2251	CG1	ILE B	101	39.198	36.664	10.492	1.00	30.11	B
ATOM	2252	CD1	ILE B	101	38.110	37.605	10.002	1.00	29.81	B
ATOM	2253	C	ILE B	101	42.988	37.015	11.040	1.00	31.04	B
ATOM	2254	O	ILE B	101	43.270	37.868	11.877	1.00	31.24	B
ATOM	2255	N	SER B	102	43.820	36.664	10.066	1.00	34.47	B
ATOM	2256	CA	SER B	102	45.124	37.303	9.940	1.00	39.17	B
ATOM	2257	CB	SER B	102	46.143	36.617	10.844	1.00	37.33	B
ATOM	2258	OG	SER B	102	46.326	35.265	10.462	1.00	41.93	B
ATOM	2259	C	SER B	102	45.632	37.289	8.501	1.00	42.45	B
ATOM	2260	O	SER B	102	45.641	36.248	7.845	1.00	42.45	B
ATOM	2261	N	PRO B	103	46.052	38.455	7.988	1.00	45.38	B
ATOM	2262	CD	PRO B	103	45.938	39.793	8.596	1.00	45.47	B
ATOM	2263	CA	PRO B	103	46.564	38.545	6.617	1.00	48.91	B
ATOM	2264	CB	PRO B	103	46.446	40.032	6.312	1.00	47.74	B
ATOM	2265	CG	PRO B	103	46.739	40.652	7.642·	1.00	47.08	B
ATOM	2266	C	PRO B	103	48.010	38.042	6.545	1.00	51.96	B
ATOM	2267	O	PRO B	103	48.688	37.957	7.568	1.00	52.51	B
ATOM	2268	N	SER B	104	48.475	37.699	5.346	1.00	55.84	B
ATOM	2269	CA	SER B	104	49.843	37.209	5.177	1.00	60.00	B
ATOM	2270	CB	SER B	104	50.018	36.578	3.791	1.00	59.60	B
ATOM	2271	OG	SER B	104	49.778	37.520	2.759	1.00	59.05	B
ATOM	2272	C	SER B	104	50.842	38.353	5.368	1.00	63.75	B
ATOM	2273	O	SER B	104	50.853	39.325	4.605	1.00	64.64	B
ATOM	2274	N	ARG B	105	51.677	38.228	6.398	1.00	66.99	B
ATOM	2275	CA	ARG B	105	52.674	39.242	6.736	1.00	69.17	B
ATOM	2276	CB	ARG B	105	53.631	38.700	7.808	1.00	70.33	B
ATOM	2277	CG	ARG B	105	54.672	37.690	7.318	1.00	72.24	B
ATOM	2278	CD	ARG B	105	54.073	36.586	6.449	1.00	73.51	B
ATOM	2279	NE	ARG B	105	52.981	35.859	7.095	1.00	75.02	B
ATOM	2280	CZ	ARG B	105	53.120	35.051	8.142	1.00	76.07	B
ATOM	2281	NH1	ARG B	105	54.314	34.852	8.684	1.00	77.38	B
ATOM	2282	NH2	ARG B	105	52.059	34.431	8.644	1.00	76.05	B
ATOM	2283	C	ARG B	105	53.464	39.720	5.523	1.00	70.38	B
ATOM	2284	O	ARG B	105	53.134	40.746	4.923	1.00	71.56	B
ATOM	2285	N	ASN B	113	46.629	40.478	-1.867	1.00	49.25	B
ATOM	2286	CA	ASN B	113	46.963	40.039	-0.515	1.00	48.42	B
ATOM	2287	CB	ASN B	113	46.726	41.181	0.477	1.00	51.23	B
ATOM	2288	CG	ASN B	113	47.268	40.875	1.863	1.00	53.89	B
ATOM	2289	OD1	ASN B	113	48.429	40.498	2.019	1.00	55.14	B

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ATOM   2290  ND2 ASN B 113     46.428  41.048   2.880  1.00 55.30      B
ATOM   2291  C   ASN B 113     46.143  38.808  -0.118  1.00 45.78      B
ATOM   2292  O   ASN B.113     45.155  38.471  -0.774  1.00 44.99      B
ATOM   2293  N   LEU B 114     46.550  38.146   0.961  1.00 42.27      B
ATOM   2294  CA  LEU B 114     45.862  36.944   1.415  1.00 38.77      B
ATOM   2295  CB  LEU B 114     46.770  35.739   1.182  1.00 39.10      B
ATOM   2296  CG  LEU B 114     46.238  34.330   1.421  1.00 40.81      B
ATOM   2297  CD1 LEU B 114     45.097  34.023   0.459  1.00 41.59      B
ATOM   2298  CD2 LEU B 114     47.379  33.341   1.222  1.00 41.03      B
ATOM   2299  C   LEU B 114     45.424  36.986   2.883  1.00 36.39      B
ATOM   2300  O   LEU B 114     46.237  37.204   3.783  1.00 35.98      B
ATOM   2301  N   LEU B 115     44.130  36.777   3.112  1.00 31.79      B
ATOM   2302  CA  LEU B 115     43.576  36.766   4.460  1.00 28.77      B
ATOM   2303  CB  LEU B 115     42.231  37.496   4.493  1.00 29.52      B
ATOM   2304  CG  LEU B 115     42.156  38.843   5.218  1.00 30.12      B
ATOM   2305  CD1 LEU B 115     43.281  39.751   4.764  1.00 30.28      B
ATOM   2306  CD2 LEU B 115     40.799  39.479   4.951  1.00 28.39      B
ATOM   2307  C   LEU B 115     43.374  35.323   4.896  1.00 27.23      B
ATOM   2308  O   LEU B 115     42.815  34.513   4.154  1.00 25.72      B
ATOM   2309  N   VAL B 116     43.825  35.002   6.103  1.00 24.13      B
ATOM   2310  CA  VAL B 116     43.695  33.651   6.618  1.00 20.76      B
ATOM   2311  CB  VAL B 116     45.078  33.098   7.078  1.00 20.02      B
ATOM   2312  CG1 VAL B 116     44.915  31.757   7.777  1.00 17.46      B
ATOM   2313  CG2 VAL B 116     45.996  32.944   5.880  1.00 19.44      B
ATOM   2314  C   VAL B 116     42.723  33.568   7.784  1.00 20.38      B
ATOM   2315  O   VAL B 116     42.860  34.293   8.766  1.00 19.54      B
ATOM   2316  N   CYS B 117     41.724  32.701   7.669  1.00 20.87      B
ATOM   2317  CA  CYS B 117     40.793  32.523   8.774  1.00 22.57      B
ATOM   2318  C   CYS B 117     41.132  31.196   9.444  1.00 21.84      B
ATOM   2319  O   CYS B 117     40.867  30.123   8.892  1.00 22.98      B
ATOM   2320  CB  CYS B 117     39.332  32.486   8.315  1.00 23.53      B
ATOM   2321  SG  CYS B 117     38.217  32.222   9.734  1.00 29.76      B
ATOM   2322  N   SER B 118     41.728  31.277  10.627  1.00 19.87      B
ATOM   2323  CA  SER B 118     42.094  30.092  11.381  1.00 18.65      B
ATOM   2324  CB  SER B 118     43.345  30.356  12.226  1.00 19.67      B
ATOM   2325  OG  SER B 118     44.463  30.672  11.421  1.00 22.97      B
ATOM   2326  C   SER B 118     40.962  29.656  12.300  1.00 18.03      B
ATOM   2327  O   SER B 118     40.579  30.389  13.209  1.00 19.82      B
ATOM   2328  N   VAL B 119     40.426  28.463  12.050  1.00 17.57      B
ATOM   2329  CA  VAL B 119     39.365  27.889  12.874  1.00 15.30      B
ATOM   2330  CB  VAL B 119     38.202  27.364  12.006  1.00 15.69      B
ATOM   2331  CG1 VAL B 119     37.091  26.852  12.892  1.00 11.64      B
ATOM   2332  CG2 VAL B 119     37.695  28.484  11.076  1.00 13.82      B
ATOM   2333  C   VAL B 119     40.073  26.739  13.579  1.00 15.38      B
ATOM   2334  O   VAL B 119     40.318  25.680  12.992  1.00 16.76      B
ATOM   2335  N   THR B 120     40.404  26.958  14.844  1.00 16.03      B
ATOM   2336  CA  THR B 120     41.165  25.988  15.615  1.00 15.04      B
ATOM   2337  CB  THR B 120     42.487  26.613  16.031  1.00 13.75      B
ATOM   2338  OG1 THR B 120     42.221  27.713  16.915  1.00 17.84      B
ATOM   2339  CG2 THR B 120     43.230  27.144  14.815  1.00 12.18      B
ATOM   2340  C   THR B 120     40.533  25.405  16.872  1.00 17.87      B
ATOM   2341  O   THR B 120     39.571  25.944  17.425  1.00 17.71      B
ATOM   2342  N   ASP B 121     41.132  24.303  17.317  1.00 19.07      B
ATOM   2343  CA  ASP B 121     40.738  23.576  18.511  1.00 20.97      B
ATOM   2344  CB  ASP B 121     41.268  24.291  19.766  1.00 24.82      B
ATOM   2345  CG  ASP B 121     42.797  24.330  19.831  1.00 31.04      B
ATOM   2346  OD1 ASP B 121     43.460  23.360  19.397  1.00 30.81      B
ATOM   2347  OD2 ASP B 121     43.339  25.333  20.346  1.00 34.38      B
ATOM   2348  C   ASP B 121     39.238  23.293  18.679  1.00 21.27      B
ATOM   2349  O   ASP B 121     38.629  23.671  19.683  1.00 23.00      B
ATOM   2350  N   PHE B 122     38.641  22.613  17.710  1.00 20.38      B
ATOM   2351  CA  PHE B 122     37.233  22.280  17.818  1.00 18.51      B
ATOM   2352  CB  PHE B 122     36.414  22.988  16.732  1.00 16.18      B
ATOM   2353  CG  PHE B 122     36.817  22.644  15.319  1.00 13.31      B
ATOM   2354  CD1 PHE B 122     37.695  23.463  14.615  1.00 11.43      B
ATOM   2355  CD2 PHE B 122     36.247  21.547  14.664  1.00 10.93      B
ATOM   2356  CE1 PHE B 122     37.998  23.210  13.272  1.00 10.91      B
ATOM   2357  CE2 PHE B 122     36.541  21.280  13.317  1.00 12.31      B
ATOM   2358  CZ  PHE B 122     37.419  22.118  12.618  1.00  8.92      B
ATOM   2359  C   PHE B 122     37.011  20.778  17.739  1.00 19.55      B
ATOM   2360  O   PHE B 122     37.889  20.029  17.301  1.00 18.45      B
ATOM   2361  N   TYR B 123     35.829  20.357  18.182  1.00 20.50      B
ATOM   2362  CA  TYR B 123     35.412  18.959  18.180  1.00 21.08      B
ATOM   2363  CB  TYR B 123     36.067  18.201  19.340  1.00 19.11      B
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ATOM	2364	CG	TYR	B	123	35.919	16.702	19.228	1.00	18.56	B
ATOM	2365	CD1	TYR	B	123	34.746	16.062	19.629	1.00	19.13	B
ATOM	2366	CE1	TYR	B	123	34.572	14.695	19.446	1.00	17.75	B
ATOM	2367	CD2	TYR	B	123	36.920	15.932	18.647	1.00	17.20	B
ATOM	2368	CE2	TYR	B	123	36.762	14.566	18.455	1.00	17.38	B
ATOM	2369	CZ	TYR	B	123	35.584	13.953	18.853	1.00	19.59	B
ATOM	2370	OH	TYR	B	123	35.412	12.608	18.631	1.00	22.32	B
ATOM	2371	C	TYR	B	123	33.896	18.957	18.351	1.00	21.83	B
ATOM	2372	O	TYR	B	123	33.365	19.708	19.165	1.00	23.26	B
ATOM	2373	N	PRO	B	124	33.175	18.126	17.584	1.00	21.65	B
ATOM	2374	CD	PRO	B	124	31.725	17.996	17.808	1.00	23.81	B
ATOM	2375	CA	PRO	B	124	33.627	17.177	16.562	1.00	22.30	B
ATOM	2376	CB	PRO	B	124	32.398	16.290	16.353	1.00	21.95	B
ATOM	2377	CG	PRO	B	124	31.270	17.237	16.586	1.00	23.07	B
ATOM	2378	C	PRO	B	124	34.128	17.813	15.266	1.00	22.20	B
ATOM	2379	O	PRO	B	124	34.204	19.035	15.149	1.00	24.43	B
ATOM	2380	N	ALA	B	125	34.457	16.971	14.291	1.00	20.63	B
ATOM	2381	CA	ALA	B	125	34.987	17.428	13.007	1.00	22.13	B
ATOM	2382	CB	ALA	B	125	35.571	16.236	12.244	1.00	20.20	B
ATOM	2383	C	ALA	B	125	34.057	18.222	12.078	1.00	22.42	B
ATOM	2384	O	ALA	B	125	34.512	19.129	11.400	1.00	24.48	B
ATOM	2385	N	GLN	B	126	32.772	17.893	12.036	1.00	25.59	B
ATOM	2386	CA	GLN	B	126	31.845	18.598	11.147	1.00	27.46	B
ATOM	2387	CB	GLN	B	126	30.414	18.101	11.357	1.00	29.99	B
ATOM	2388	CG	GLN	B	126	30.283	16.595	11.480	1.00	36.21	B
ATOM	2389	CD	GLN	B	126	30.625	16.102	12.870	1.00	38.28	B
ATOM	2390	OE1	GLN	B	126	30.558	14.905	13.158	1.00	40.46	B
ATOM	2391	NE2	GLN	B	126	30.989	17.030	13.745	1.00	40.92	B
ATOM	2392	C	GLN	B	126	31.876	20.112	11.333	1.00	28.28	B
ATOM	2393	O	GLN	B	126	31.571	20.627	12.410	1.00	29.36	B
ATOM	2394	N	ILE	B	127	32.221	20.831	10.273	1.00	27.17	B
ATOM	2395	CA	ILE	B	127	32.292	22.279	10.353	1.00	27.02	B
ATOM	2396	CB	ILE	B	127	33.656	22.716	10.931	1.00	27.21	B
ATOM	2397	CG2	ILE	B	127	34.767	22.453	9.898	1.00	21.63	B
ATOM	2398	CG1	ILE	B	127	33.612	24.195	11.316	1.00	24.63	B
ATOM	2399	CD1	ILE	B	127	34.760	24.633	12.198	1.00	25.86	B
ATOM	2400	C	ILE	B	127	32.117	22.903	8.969	1.00	27.10	B
ATOM	2401	O	ILE	B	127	32.393	22.258	7.956	1.00	26.58	B
ATOM	2402	N	LYS	B	128	31.666	24.155	8.940	1.00	25.41	B
ATOM	2403	CA	LYS	B	128	31.457	24.884	7.689	1.00	27.45	B
ATOM	2404	CB	LYS	B	128	29.964	24.927	7.334	1.00	29.68	B
ATOM	2405	CG	LYS	B	128	29.633	25.685	6.046	1.00	34.69	B
ATOM	2406	CD	LYS	B	128	30.129	24.954	4.793	1.00	38.25	B
ATOM	2407	CE	LYS	B	128	29.802	25.742	3.517	1.00	40.20	B
ATOM	2408	NZ	LYS	B	128	30.281	25.071	2.271	1.00	39.87	B
ATOM	2409	C	LYS	B	128	31.983	26.301	7.861	1.00	25.41	B
ATOM	2410	O	LYS	B	128	31.559	27.019	8.759	1.00	26.68	B
ATOM	2411	N	VAL	B	129	32.911	26.700	7.002	1.00	25.70	B
ATOM	2412	CA	VAL	B	129	33.493	28.034	7.078	1.00	24.82	B
ATOM	2413	CB	VAL	B	129	35.013	27.956	7.329	1.00	24.17	B
ATOM	2414	CG1	VAL	B	129	35.592	29.351	7.452	1.00	22.14	B
ATOM	2415	CG2	VAL	B	129	35.295	27.136	8.583	1.00	22.44	B
ATOM	2416	C	VAL	B	129	33.248	28.791	5.778	1.00	25.17	B
ATOM	2417	O	VAL	B	129	33.532	28.283	4.701	1.00	25.50	B
ATOM	2418	N	ARG	B	130	32.724	30.007	5.884	1.00	27.21	B
ATOM	2419	CA	ARG	B	130	32.445	30.814	4.701	1.00	28.49	B
ATOM	2420	CB	ARG	B	130	30.931	30.920	4.470	1.00	31.77	B
ATOM	2421	CG	ARG	B	130	30.239	29.591	4.183	1.00	34.92	B
ATOM	2422	CD	ARG	B	130	28.927	29.813	3.432	1.00	41.30	B
ATOM	2423	NE	ARG	B	130	27.834	30.254	4.291	1.00	42.15	B
ATOM	2424	CZ	ARG	B	130	27.032	29.426	4.953	1.00	46.05	B
ATOM	2425	NH1	ARG	B	130	27.200	28.112	4.849	1.00	45.50	B
ATOM	2426	NH2	ARG	B	130	26.061	29.910	5.718	1.00	48.30	B
ATOM	2427	C	ARG	B	130	33.036	32.211	4.792	1.00	27.57	B
ATOM	2428	O	ARG	B	130	33.130	32.789	5.874	1.00	26.00	B
ATOM	2429	N	TRP	B	131	33.440	32.744	3.645	1.00	27.37	B
ATOM	2430	CA	TRP	B	131	34.004	34.085	3.571	1.00	30.27	B
ATOM	2431	CB	TRP	B	131	35.281	34.083	2.737	1.00	30.21	B
ATOM	2432	CG	TRP	B	131	36.532	33.844	3.521	1.00	32.32	B
ATOM	2433	CD2	TRP	B	131	37.155	34.757	4.432	1.00	32.41	B
ATOM	2434	CE2	TRP	B	131	38.334	34.142	4.900	1.00	33.07	B
ATOM	2435	CE3	TRP	B	131	36.831	36.039	4.897	1.00	31.75	B
ATOM	2436	CD1	TRP	B	131	37.333	32.741	3.478	1.00	32.80	B
ATOM	2437	NE1	TRP	B	131	38.420	32.913	4.300	1.00	31.53	B

ATOM	2438	CZ2	TRP	B	131	39.193	34.764	5.812	1.00	32.82	B
ATOM	2439	CZ3	TRP	B	131	37.680	36.656	5.800	1.00	32.08	B
ATOM	2440	CH2	TRP	B	131	38.849	36.017	6.249	1.00	33.40	B
ATOM	2441	C	TRP	B	131	33.003	35.064	2.949	1.00	32.99	B
ATOM	2442	O	TRP	B	131	32.367	34.759	1.940	1.00	32.18	B
ATOM	2443	N	PHE	B	132	32.879	36.242	3.550	1.00	35.48	B
ATOM	2444	CA	PHE	B	132	31.962	37.263	3.058	1.00	39.35	B
ATOM	2445	CB	PHE	B	132	30.856	37.501	4.077	1.00	38.14	B
ATOM	2446	CG	PHE	B	132	29.843	36.407	4.123	1.00	38.39	B
ATOM	2447	CD1	PHE	B	132	28.804	36.373	3.202	1.00	38.31	B
ATOM	2448	CD2	PHE	B	132	29.930	35.399	5.075	1.00	38.21	B
ATOM	2449	CE1	PHE	B	132	27.860	35.348	3.229	1.00	39.26	B
ATOM	2450	CE2	PHE	B	132	28.992	34.369	5.111	1.00	38.83	B
ATOM	2451	CZ	PHE	B	132	27.954	34.345	4.184	1.00	37.91	B
ATOM	2452	C	PHE	B	132	32.650	38.583	2.755	1.00	41.59	B
ATOM	2453	O	PHE	B	132	33.515	39.025	3.508	1.00	42.72	B
ATOM	2454	N	ARG	B	133	32.267	39.203	1.640	1.00	45.04	B
ATOM	2455	CA	ARG	B	133	32.829	40.490	1.242	1.00	48.28	B
ATOM	2456	CB	ARG	B	133	32.510	40.787	-0.227	1.00	51.68	B
ATOM	2457	CG	ARG	B	133	33.293	41.958	-0.829	1.00	55.78	B
ATOM	2458	CD	ARG	B	133	34.787	41.655	-0.867	1.00	57.07	B
ATOM	2459	NE	ARG	B	133	35.580	42.741	-1.440	1.00	59.30	B
ATOM	2460	CZ	ARG	B	133	35.523	43.135	-2.710	1.00	60.93	B
ATOM	2461	NH1	ARG	B	133	34.702	42.536	-3.564	1.00	61.44	B
ATOM	2462	NH2	ARG	B	133	36.295	44.132	-3.128	1.00	61.77	B
ATOM	2463	C	ARG	B	133	32.129	41.492	2.145	1.00	49.07	B
ATOM	2464	O	ARG	B	133	32.299	41.460	3.358	1.00	51.26	B
ATOM	2465	N	ASN	B	134	31.331	42.376	1.572	1.00	49.23	B
ATOM	2466	CA	ASN	B	134	30.614	43.336	2.393	1.00	48.83	B
ATOM	2467	CB	ASN	B	134	30.582	44.702	1.710	1.00	45.93	B
ATOM	2468	CG	ASN	B	134	31.973	45.290	1.523	1.00	45.10	B
ATOM	2469	OD1	ASN	B	134	32.450	45.440	0.397	1.00	41.81	B
ATOM	2470	ND2	ASN	B	134	32.634	45.618	2.634	1.00	41.82	B
ATOM	2471	C	ASN	B	134	29.203	42.795	2.594	1.00	50.25	B
ATOM	2472	O	ASN	B	134	28.222	43.529	2.508	1.00	52.28	B
ATOM	2473	N	ASP	B	135	29.122	41.496	2.868	1.00	50.15	B
ATOM	2474	CA	ASP	B	135	27.847	40.819	3.072	1.00	51.07	B
ATOM	2475	C	ASP	B	135	27.590	39.855	1.910	1.00	51.76	B
ATOM	2476	O	ASP	B	135	26.586	39.136	1.893	1.00	51.82	B
ATOM	2477	N	GLN	B	136	28.507	39.856	0.944	1.00	50.97	B
ATOM	2478	CA	GLN	B	136	28.421	38.999	-0.240	1.00	51.24	B
ATOM	2479	CB	GLN	B	136	28.766	39.805	-1.493	1.00	53.78	B
ATOM	2480	CG	GLN	B	136	28.736	39.000	-2.783	1.00	58.16	B
ATOM	2481	CD	GLN	B	136	29.675	39.559	-3.839	1.00	59.39	B
ATOM	2482	OE1	GLN	B	136	30.895	39.527	-3.675	1.00	60.12	B
ATOM	2483	NE2	GLN	B	136	29.110	40.078	-4.926	1.00	59.45	B
ATOM	2484	C	GLN	B	136	29.395	37.825	-0.124	1.00	49.46	B
ATOM	2485	O	GLN	B	136	30.607	38.026	-0.035	1.00	48.29	B
ATOM	2486	N	GLU	B	137	28.873	36.603	-0.144	1.00	47.64	B
ATOM	2487	CA	GLU	B	137	29.730	35.432	-0.027	1.00	46.85	B
ATOM	2488	CB	GLU	B	137	28.899	34.152	0.022	1.00	47.17	B
ATOM	2489	CG	GLU	B	137	29.695	32.975	0.556	1.00	50.22	B
ATOM	2490	CD	GLU	B	137	28.866	31.726	0.743	1.00	52.65	B
ATOM	2491	OE1	GLU	B	137	27.699	31.842	1.171	1.00	55.57	B
ATOM	2492	OE2	GLU	B	137	29.391	30.623	0.478	1.00	54.41	B
ATOM	2493	C	GLU	B	137	30.755	35.320	-1.149	1.00	45.23	B
ATOM	2494	O	GLU	B	137	30.445	35.544	-2.314	1.00	45.04	B
ATOM	2495	N	GLU	B	138	31.983	34.977	-0.776	1.00	44.63	B
ATOM	2496	CA	GLU	B	138	33.078	34.808	-1.724	1.00	44.36	B
ATOM	2497	CB	GLU	B	138	34.284	35.658	-1.307	1.00	45.65	B
ATOM	2498	CG	GLU	B	138	34.076	37.166	-1.320	1.00	48.42	B
ATOM	2499	CD	GLU	B	138	34.144	37.761	-2.717	1.00	50.71	B
ATOM	2500	OE1	GLU	B	138	35.120	37.471	-3.442	1.00	51.60	B
ATOM	2501	OE2	GLU	B	138	33.227	38.526	-3.086	1.00	50.99	B
ATOM	2502	C	GLU	B	138	33.498	33.335	-1.740	1.00	43.68	B
ATOM	2503	O	GLU	B	138	33.831	32.769	-0.697	1.00	43.53	B
ATOM	2504	N	THR	B	139	33.468	32.711	-2.914	1.00	42.58	B
ATOM	2505	CA	THR	B	139	33.881	31.313	-3.044	1.00	41.76	B
ATOM	2506	CB	THR	B	139	32.739	30.415	-3.543	1.00	41.04	B
ATOM	2507	OG1	THR	B	139	32.207	30.948	-4.759	1.00	40.71	B
ATOM	2508	CG2	THR	B	139	31.641	30.325	-2.492	1.00	41.89	B
ATOM	2509	C	THR	B	139	35.038	31.245	-4.026	1.00	40.93	B
ATOM	2510	O	THR	B	139	35.855	30.326	-3.981	1.00	40.04	B
ATOM	2511	N	ALA	B	140	35.096	32.224	-4.920	1.00	40.67	B

ATOM	2512	CA	ALA	B	140	36.179	32.305	-5.887	1.00	41.22	B
ATOM	2513	CB	ALA	B	140	35.714	33.016	-7.158	1.00	41.13	B
ATOM	2514	C	ALA	B	140	37.247	33.126	-5.177	1.00	41.09	B
ATOM	2515	O	ALA	B	140	36.976	34.232	-4.693	1.00	43.11	B
ATOM	2516	N	GLY	B	141	38.455	32.582	-5.102	1.00	39.60	B
ATOM	2517	CA	GLY	B	141	39.526	33.278	-4.418	1.00	35.11	B
ATOM	2518	C	GLY	B	141	39.739	32.651	-3.051	1.00	33.42	B
ATOM	2519	O	GLY	B	141	40.605	33.076	-2.287	1.00	31.24	B
ATOM	2520	N	VAL	B	142	38.945	31.628	-2.750	1.00	31.89	B
ATOM	2521	CA	VAL	B	142	39.033	30.937	-1.470	1.00	32.27	B
ATOM	2522	CB	VAL	B	142	37.645	30.790	-0.813	1.00	31.90	B
ATOM	2523	CG1	VAL	B	142	37.733	29.861	0.400	1.00	32.37	B
ATOM	2524	CG2	VAL	B	142	37.125	32.161	-0.402	1.00	32.53	B
ATOM	2525	C	VAL	B	142	39.652	29.552	-1.564	1.00	31.26	B
ATOM	2526	O	VAL	B	142	39.211	28.712	-2.343	1.00	32.44	B
ATOM	2527	N	VAL	B	143	40.676	29.326	-0.752	1.00	30.76	B
ATOM	2528	CA	VAL	B	143	41.357	28.045	-0.702	1.00	29.79	B
ATOM	2529	CB	VAL	B	143	42.815	28.154	-1.162	1.00	29.63	B
ATOM	2530	CG1	VAL	B	143	43.439	26.768	-1.212	1.00	31.60	B
ATOM	2531	CG2	VAL	B	143	42.885	28.819	-2.514	1.00	33.43	B
ATOM	2532	C	VAL	B	143	41.357	27.575	0.749	1.00	30.61	B
ATOM	2533	O	VAL	B	143	41.665	28.338	1.667	1.00	28.64	B
ATOM	2534	N	SER	B	144	41.017	26.313	0.950	1.00	29.65	B
ATOM	2535	CA	SER	B	144	40.970	25.756	2.282	1.00	28.42	B
ATOM	2536	CB	SER	B	144	39.541	25.325	2.605	1.00	29.23	B
ATOM	2537	OG	SER	B	144	39.457	24.705	3.875	1.00	33.81	B
ATOM	2538	C	SER	B	144	41.900	24.562	2.373	1.00	27.32	B
ATOM	2539	O	SER	B	144	42.101	23.840	1.397	1.00	27.40	B
ATOM	2540	N	THR	B	145	42.492	24.372	3.542	1.00	25.70	B
ATOM	2541	CA	THR	B	145	43.364	23.227	3.755	1.00	24.82	B
ATOM	2542	CB	THR	B	145	44.272	23.418	4.995	1.00	25.01	B
ATOM	2543	OG1	THR	B	145	43.467	23.399	6.186	1.00	25.18	B
ATOM	2544	CG2	THR	B	145	45.022	24.743	4.923	1.00	23.27	B
ATOM	2545	C	THR	B	145	42.392	22.100	4.071	1.00	24.16	B
ATOM	2546	O	THR	B	145	41.200	22.335	4.272	1.00	23.86	B
ATOM	2547	N	PRO	B	146	42.865	20.854	4.081	1.00	23.17	B
ATOM	2548	CD	PRO	B	146	44.116	20.231	3.618	1.00	22.29	B
ATOM	2549	CA	PRO	B	146	41.854	19.852	4.419	1.00	23.18	B
ATOM	2550	CB	PRO	B	146	42.521	18.536	4.008	1.00	24.20	B
ATOM	2551	CG	PRO	B	146	43.998	18.833	4.162	1.00	22.82	B
ATOM	2552	C	PRO	B	146	41.597	19.945	5.933	1.00	22.63	B
ATOM	2553	O	PRO	B	146	42.213	20.766	6.625	1.00	21.32	B
ATOM	2554	N	LEU	B	147	40.667	19.146	6.445	1.00	22.60	B
ATOM	2555	CA	LEU	B	147	40.414	19.142	7.883	1.00	22.34	B
ATOM	2556	CB	LEU	B	147	39.241	18.216	8.213	1.00	22.17	B
ATOM	2557	CG	LEU	B	147	38.934	17.973	9.691	1.00	24.53	B
ATOM	2558	CD1	LEU	B	147	38.629	19.288	10.368	1.00	25.95	B
ATOM	2559	CD2	LEU	B	147	37.746	17.026	9.826	1.00	25.55	B
ATOM	2560	C	LEU	B	147	41.710	18.609	8.515	1.00	21.99	B
ATOM	2561	O	LEU	B	147	42.290	17.640	8.024	1.00	21.35	B
ATOM	2562	N	ILE	B	148	42.175	19.246	9.581	1.00	20.48	B
ATOM	2563	CA	ILE	B	148	43.406	18.813	10.228	1.00	19.15	B
ATOM	2564	CB	ILE	B	148	44.392	19.990	10.403	1.00	21.68	B
ATOM	2565	CG2	ILE	B	148	45.666	19.505	11.065	1.00	20.10	B
ATOM	2566	CG1	ILE	B	148	44.728	20.609	9.041	1.00	25.04	B
ATOM	2567	CD1	ILE	B	148	45.416	19.649	8.090	1.00	29.06	B
ATOM	2568	C	ILE	B	148	43.160	18.208	11.603	1.00	17.56	B
ATOM	2569	O	ILE	B	148	42.566	18.852	12.467	1.00	14.88	B
ATOM	2570	N	ARG	B	149	43.625	16.973	11.795	1.00	15.95	B
ATOM	2571	CA	ARG	B	149	43.492	16.273	13.077	1.00	17.47	B
ATOM	2572	CB	ARG	B	149	43.420	14.763	12.852	1.00	16.94	B
ATOM	2573	CG	ARG	B	149	43.202	13.941	14.128	1.00	20.29	B
ATOM	2574	CD	ARG	B	149	43.252	12.448	13.821	1.00	21.64	B
ATOM	2575	NE	ARG	B	149	42.168	12.028	12.938	1.00	21.97	B
ATOM	2576	CZ	ARG	B	149	40.934	11.742	13.348	1.00	23.22	B
ATOM	2577	NH1	ARG	B	149	40.015	11.374	12.471	1.00	23.89	B
ATOM	2578	NH2	ARG	B	149	40.623	11.803	14.636	1.00	23.11	B
ATOM	2579	C	ARG	B	149	44.720	16.603	13.937	1.00	17.66	B
ATOM	2580	O	ARG	B	149	45.850	16.311	13.549	1.00	17.51	B
ATOM	2581	N	ASN	B	150	44.496	17.210	15.098	1.00	16.67	B
ATOM	2582	CA	ASN	B	150	45.592	17.593	15.980	1.00	16.94	B
ATOM	2583	CB	ASN	B	150	45.174	18.756	16.890	1.00	15.38	B
ATOM	2584	CG	ASN	B	150	44.899	20.034	16.118	1.00	18.41	B
ATOM	2585	OD1	ASN	B	150	45.685	20.436	15.249	1.00	19.05	B

ATOM	2586	ND2	ASN	B	150	43.790	20.691	16.440	1.00	17.88	B
ATOM	2587	C	ASN	B	150	46.116	16.452	16.841	1.00	18.47	B
ATOM	2588	O	ASN	B	150	47.220	16.540	17.384	1.00	17.03	B
ATOM	2589	N	GLY	B	151	45.324	15.391	16.968	1.00	17.77	B
ATOM	2590	CA	GLY	B	151	45.734	14.251	17.770	1.00	19.16	B
ATOM	2591	C	GLY	B	151	45.258	14.293	19.213	1.00	20.44	B
ATOM	2592	O	GLY	B	151	45.198	13.264	19.877	1.00	22.31	B
ATOM	2593	N	ASP	B	152	44.906	15.475	19.701	1.00	20.79	B
ATOM	2594	CA	ASP	B	152	44.450	15.624	21.077	1.00	21.97	B
ATOM	2595	CB	ASP	B	152	45.192	16.790	21.748	1.00	21.95	B
ATOM	2596	CG	ASP	B	152	45.027	18.101	20.992	1.00	28.05	B
ATOM	2597	OD1	ASP	B	152	45.764	19.060	21.300	1.00	30.94	B
ATOM	2598	OD2	ASP	B	152	44.158	18.181	20.090	1.00	28.02	B
ATOM	2599	C	ASP	B	152	42.939	15.847	21.175	1.00	20.51	B
ATOM	2600	O	ASP	B	152	42.474	16.619	22.010	1.00	21.63	B
ATOM	2601	N	TRP	B	153	42.183	15.166	20.322	1.00	19.19	B
ATOM	2602	CA	TRP	B	153	40.724	15.278	20.300	1.00	16.82	B
ATOM	2603	CB	TRP	B	153	40.121	14.865	21.657	1.00	15.80	B
ATOM	2604	CG	TRP	B	153	40.326	13.408	22.005	1.00	16.21	B
ATOM	2605	CD2	TRP	B	153	39.415	12.322	21.756	1.00	16.58	B
ATOM	2606	CE2	TRP	B	153	40.047	11.134	22.188	1.00	15.08	B
ATOM	2607	CE3	TRP	B	153	38.125	12.238	21.211	1.00	15.69	B
ATOM	2608	CD1	TRP	B	153	41.435	12.848	22.564	1.00	14.68	B
ATOM	2609	NE1	TRP	B	153	41.278	11.483	22.677	1.00	15.53	B
ATOM	2610	CZ2	TRP	B	153	39.438	9.879	22.087	1.00	15.60	B
ATOM	2611	CZ3	TRP	B	153	37.518	10.987	21.112	1.00	14.22	B
ATOM	2612	CH2	TRP	B	153	38.176	9.827	21.549	1.00	13.89	B
ATOM	2613	C	TRP	B	153	40.194	16.660	19.890	1.00	16.09	B
ATOM	2614	O	TRP	B	153	39.159	17.110	20.379	1.00	14.28	B
ATOM	2615	N	THR	B	154	40.929	17.342	19.020	1.00	15.11	B
ATOM	2616	CA	THR	B	154	40.499	18.627	18.483	1.00	16.19	B
ATOM	2617	CB	THR	B	154	41.176	19.877	19.150	1.00	18.02	B
ATOM	2618	OG1	THR	B	154	42.602	19.804	19.008	1.00	19.50	B
ATOM	2619	CG2	THR	B	154	40.788	20.000	20.608	1.00	15.03	B
ATOM	2620	C	THR	B	154	40.908	18.602	17.024	1.00	15.24	B
ATOM	2621	O	THR	B	154	41.773	17.832	16.635	1.00	15.24	B
ATOM	2622	N	PHE	B	155	40.269	19.437	16.220	1.00	18.04	B
ATOM	2623	CA	PHE	B	155	40.577	19.538	14.801	1.00	16.03	B
ATOM	2624	CB	PHE	B	155	39.404	19.042	13.938	1.00	16.98	B
ATOM	2625	CG	PHE	B	155	39.069	17.579	14.118	1.00	17.58	B
ATOM	2626	CD1	PHE	B	155	38.133	17.170	15.074	1.00	18.20	B
ATOM	2627	CD2	PHE	B	155	39.670	16.611	13.312	1.00	17.71	B
ATOM	2628	CE1	PHE	B	155	37.799	15.810	15.223	1.00	17.81	B
ATOM	2629	CE2	PHE	B	155	39.346	15.250	13.451	1.00	17.57	B
ATOM	2630	CZ	PHE	B	155	38.407	14.849	14.409	1.00	16.39	B
ATOM	2631	C	PHE	B	155	40.793	21.015	14.503	1.00	16.67	B
ATOM	2632	O	PHE	B	155	40.532	21.870	15.352	1.00	16.84	B
ATOM	2633	N	GLN	B	156	41.281	21.312	13.304	1.00	14.72	B
ATOM	2634	CA	GLN	B	156	41.467	22.689	12.886	1.00	14.66	B
ATOM	2635	CB	GLN	B	156	42.811	23.264	13.357	1.00	16.69	B
ATOM	2636	CG	GLN	B	156	44.039	22.698	12.669	1.00	15.65	B
ATOM	2637	CD	GLN	B	156	45.292	23.486	13.011	1.00	17.87	B
ATOM	2638	OE1	GLN	B	156	45.477	24.617	12.555	1.00	17.56	B
ATOM	2639	NE2	GLN	B	156	46.153	22.897	13.830	1.00	15.40	B
ATOM	2640	C	GLN	B	156	41.398	22.722	11.371	1.00	14.00	B
ATOM	2641	O	GLN	B	156	41.477	21.691	10.716	1.00	15.17	B
ATOM	2642	N	ILE	B	157	41.241	23.911	10.818	1.00	15.34	B
ATOM	2643	CA	ILE	B	157	41.165	24.057	9.383	1.00	17.26	B
ATOM	2644	CB	ILE	B	157	39.791	23.585	8.856	1.00	16.56	B
ATOM	2645	CG2	ILE	B	157	38.675	24.429	9.474	1.00	13.07	B
ATOM	2646	CG1	ILE	B	157	39.765	23.649	7.326	1.00	17.72	B
ATOM	2647	CD1	ILE	B	157	38.583	22.913	6.712	1.00	14.50	B
ATOM	2648	C	ILE	B	157	41.379	25.523	9.074	1.00	18.67	B
ATOM	2649	O	ILE	B	157	40.823	26.391	9.745	1.00	22.28	B
ATOM	2650	N	LEU	B	158	42.217	25.795	8.083	1.00	18.98	B
ATOM	2651	CA	LEU	B	158	42.508	27.162	7.690	1.00	20.77	B
ATOM	2652	CB	LEU	B	158	44.022	27.368	7.555	1.00	22.23	B
ATOM	2653	CG	LEU	B	158	44.851	27.525	8.838	1.00	26.12	B
ATOM	2654	CD1	LEU	B	158	44.689	26.320	9.740	1.00	29.01	B
ATOM	2655	CD2	LEU	B	158	46.311	27.701	8.465	1.00	28.46	B
ATOM	2656	C	LEU	B	158	41.817	27.484	6.371	1.00	20.61	B
ATOM	2657	O	LEU	B	158	41.934	26.734	5.401	1.00	19.39	B
ATOM	2658	N	VAL	B	159	41.088	28.596	6.346	1.00	21.67	B
ATOM	2659	CA	VAL	B	159	40.380	29.011	5.141	1.00	21.90	B

ATOM	2660	CB	VAL	B	159	38.855	29.061	5.365	1.00	22.06	B
ATOM	2661	CG1	VAL	B	159	38.147	29.252	4.043	1.00	20.55	B
ATOM	2662	CG2	VAL	B	159	38.381	27.766	6.009	1.00	20.83	B
ATOM	2663	C	VAL	B	159	40.899	30.379	4.749	1.00	21.80	B
ATOM	2664	O	VAL	B	159	40.721	31.357	5.473	1.00	20.82	B
ATOM	2665	N	MET	B	160	41.555	30.416	3.592	1.00	23.56	B
ATOM	2666	CA	MET	B	160	42.179	31.613	3.055	1.00	25.12	B
ATOM	2667	CB	MET	B	160	43.580	31.257	2.559	1.00	26.80	B
ATOM	2668	CG	MET	B	160	44.479	30.736	3.678	1.00	32.00	B
ATOM	2669	SD	MET	B	160	45.850	29.700	3.145	1.00	38.02	B
ATOM	2670	CE	MET	B	160	45.094	28.065	3.307	1.00	35.43	B
ATOM	2671	C	MET	B	160	41.387	32.269	1.941	1.00	28.27	B
ATOM	2672	O	MET	B	160	40.684	31.602	1.177	1.00	28.76	B
ATOM	2673	N	LEU	B	161	41.518	33.588	1.854	1.00	29.59	B
ATOM	2674	CA	LEU	B	161	40.820	34.366	0.845	1.00	32.69	B
ATOM	2675	CB	LEU	B	161	39.669	35.142	1.487	1.00	30.80	B
ATOM	2676	CG	LEU	B	161	39.031	36.199	0.586	1.00	31.56	B
ATOM	2677	CD1	LEU	B	161	38.156	35.516	-0.460	1.00	29.64	B
ATOM	2678	CD2	LEU	B	161	38.213	37.167	1.423	1.00	29.89	B
ATOM	2679	C	LEU	B	161	41.755	35.349	0.154	1.00	35.59	B
ATOM	2680	O	LEU	B	161	42.350	36.216	0.801	1.00	35.54	B
ATOM	2681	N	GLU	B	162	41.895	35.203	-1.158	1.00	39.87	B
ATOM	2682	CA	GLU	B	162	42.728	36.118	-1.927	1.00	44.05	B
ATOM	2683	CB	GLU	B	162	42.995	35.565	-3.331	1.00	46.86	B
ATOM	2684	CG	GLU	B	162	43.795	36.497	-4.239	1.00	50.98	B
ATOM	2685	CD	GLU	B	162	45.274	36.537	-3.891	1.00	54.75	B
ATOM	2686	OE1	GLU	B	162	45.604	36.802	-2.715	1.00	56.53	B
ATOM	2687	OE2	GLU	B	162	46.108	36.308	-4.796	1.00	55.16	B
ATOM	2688	C	GLU	B	162	41.879	37.372	-2.029	1.00	44.69	B
ATOM	2689	O	GLU	B	162	40.719	37.302	-2.434	1.00	44.39	B
ATOM	2690	N	MET	B	163	42.436	38.514	-1.648	1.00	46.67	B
ATOM	2691	CA	MET	B	163	41.670	39.746	-1.716	1.00	49.56	B
ATOM	2692	CB	MET	B	163	40.881	39.949	-0.412	1.00	51.22	B
ATOM	2693	CG	MET	B	163	41.652	39.675	0.876	1.00	51.58	B
ATOM	2694	SD	MET	B	163	42.910	40.901	1.274	1.00	56.87	B
ATOM	2695	CE	MET	B	163	41.915	42.187	2.029	1.00	54.89	B
ATOM	2696	C	MET	B	163	42.487	40.986	-2.028	1.00	51.43	B
ATOM	2697	O	MET	B	163	43.717	40.988	-1.942	1.00	51.02	B
ATOM	2698	N	THR	B	164	41.777	42.038	-2.412	1.00	53.70	B
ATOM	2699	CA	THR	B	164	42.385	43.316	-2.738	1.00	56.61	B
ATOM	2700	CB	THR	B	164	41.889	43.820	-4.116	1.00	57.48	B
ATOM	2701	OG1	THR	B	164	40.457	43.744	-4.172	1.00	57.81	B
ATOM	2702	CG2	THR	B	164	42.480	42.967	-5.234	1.00	57.23	B
ATOM	2703	C	THR	B	164	42.012	44.318	-1.642	1.00	57.80	B
ATOM	2704	O	THR	B	164	40.866	44.766	-1.555	1.00	57.08	B
ATOM	2705	N	PRO	B	165	42.976	44.658	-0.770	1.00	58.98	B
ATOM	2706	CD	PRO	B	165	44.315	44.055	-0.647	1.00	59.54	B
ATOM	2707	CA	PRO	B	165	42.734	45.605	0.322	1.00	60.52	B
ATOM	2708	CB	PRO	B	165	44.063	45.608	1.078	1.00	60.33	B
ATOM	2709	CG	PRO	B	165	44.604	44.236	0.822	1.00	60.42	B
ATOM	2710	C	PRO	B	165	42.347	47.002	-0.163	1.00	61.65	B
ATOM	2711	O	PRO	B	165	43.149	47.698	-0.790	1.00	61.24	B
ATOM	2712	N	GLN	B	166	41.110	47.395	0.126	1.00	62.45	B
ATOM	2713	CA	GLN	B	166	40.598	48.709	-0.250	1.00	63.32	B
ATOM	2714	CB	GLN	B	166	39.605	48.590	-1.410	1.00	65.46	B
ATOM	2715	CG	GLN	B	166	40.177	47.945	-2.661	1.00	69.00	B
ATOM	2716	CD	GLN	B	166	39.195	47.942	-3.819	1.00	71.19	B
ATOM	2717	OE1	GLN	B	166	38.071	47.448	-3.697	1.00	72.48	B
ATOM	2718	NE2	GLN	B	166	39.617	48.492	-4.954	1.00	72.65	B
ATOM	2719	C	GLN	B	166	39.893	49.287	0.970	1.00	62.65	B
ATOM	2720	O	GLN	B	166	39.021	48.635	1.550	1.00	62.16	B
ATOM	2721	N	ARG	B	167	40.266	50.501	1.366	1.00	61.62	B
ATOM	2722	CA	ARG	B	167	39.645	51.111	2.535	1.00	60.86	B
ATOM	2723	CB	ARG	B	167	40.190	52.525	2.777	1.00	62.57	B
ATOM	2724	CG	ARG	B	167	39.953	53.029	4.204	1.00	64.82	B
ATOM	2725	CD	ARG	B	167	40.742	52.198	5.227	1.00	67.31	B
ATOM	2726	NE	ARG	B	167	40.094	52.143	6.539	1.00	69.03	B
ATOM	2727	CZ	ARG	B	167	40.570	51.477	7.591	1.00	69.14	B
ATOM	2728	NH1	ARG	B	167	41.710	50.804	7.499	1.00	69.34	B
ATOM	2729	NH2	ARG	B	167	39.897	51.471	8.735	1.00	69.52	B
ATOM	2730	C	ARG	B	167	38.136	51.154	2.333	1.00	59.19	B
ATOM	2731	O	ARG	B	167	37.647	51.615	1.303	1.00	58.60	B
ATOM	2732	N	GLY	B	168	37.404	50.656	3.320	1.00	58.18	B
ATOM	2733	CA	GLY	B	168	35.959	50.632	3.226	1.00	56.57	B

ATOM	2734	C	GLY B 168	35.466	49.200	3.191	1.00 55.42	B
ATOM	2735	O	GLY B 168	34.306	48.924	3.495	1.00 55.98	B
ATOM	2736	N	ASP B 169	36.350	48.280	2.814	1.00 53.44	B
ATOM	2737	CA	ASP B 169	35.979	46.871	2.757	1.00 51.76	B
ATOM	2738	CB	ASP B 169	36.841	46.115	1.740	1.00 50.49	B
ATOM	2739	CG	ASP B 169	36.428	46.392	0.311	1.00 50.57	B
ATOM	2740	OD1	ASP B 169	35.207	46.479	0.060	1.00 49.92	B
ATOM	2741	OD2	ASP B 169	37.318	46.507	-0.559	1.00 49.84	B
ATOM	2742	C	ASP B 169	36.083	46.181	4.110	1.00 49.36	B
ATOM	2743	O	ASP B 169	37.066	46.343	4.836	1.00 48.92	B
ATOM	2744	N	VAL B 170	35.047	45.418	4.436	1.00 47.48	B
ATOM	2745	CA	VAL B 170	34.981	44.667	5.680	1.00 45.10	B
ATOM	2746	CB	VAL B 170	33.800	45.130	6.543	1.00 45.86	B
ATOM	2747	CG1	VAL B 170	33.702	44.268	7.795	1.00 46.26	B
ATOM	2748	CG2	VAL B 170	33.974	46.598	6.906	1.00 46.23	B
ATOM	2749	C	VAL B 170	34.787	43.191	5.342	1.00 43.62	B
ATOM	2750	O	VAL B 170	33.774	42.807	4.762	1.00 42.86	B
ATOM	2751	N	TYR B 171	35.762	42.367	5.704	1.00 41.69	B
ATOM	2752	CA	TYR B 171	35.694	40.935	5.425	1.00 38.95	B
ATOM	2753	CB	TYR B 171	37.044	40.455	4.899	1.00 37.52	B
ATOM	2754	CG	TYR B 171	37.405	41.031	3.553	1.00 38.12	B
ATOM	2755	CD1	TYR B 171	37.023	40.391	2.376	1.00 37.52	B
ATOM	2756	CE1	TYR B 171	37.342	40.923	1.131	1.00 38.06	B
ATOM	2757	CD2	TYR B 171	38.118	42.224	3.454	1.00 37.54	B
ATOM	2758	CE2	TYR B 171	38.442	42.767	2.216	1.00 38.45	B
ATOM	2759	CZ	TYR B 171	38.052	42.110	1.056	1.00 39.25	B
ATOM	2760	OH	TYR B 171	38.372	42.641	-0.172	1.00 38.84	B
ATOM	2761	C	TYR B 171	35.314	40.139	6.671	1.00 37.46	B
ATOM	2762	O	TYR B 171	35.791	40.428	7.773	1.00 34.85	B
ATOM	2763	N	THR B 172	34.452	39.140	6.501	1.00 35.06	B
ATOM	2764	CA	THR B 172	34.049	38.328	7.638	1.00 35.81	B
ATOM	2765	CB	THR B 172	32.589	38.622	8.064	1.00 38.37	B
ATOM	2766	OG1	THR B 172	31.688	38.177	7.043	1.00 42.02	B
ATOM	2767	CG2	THR B 172	32.390	40.119	8.292	1.00 39.83	B
ATOM	2768	C	THR B 172	34.182	36.830	7.406	1.00 33.71	B
ATOM	2769	O	THR B 172	33.953	36.335	6.300	1.00 32.99	B
ATOM	2770	N	CYS B 173	34.578	36.123	8.463	1.00 32.09	B
ATOM	2771	CA	CYS B 173	34.714	34.670	8.438	1.00 31.08	B
ATOM	2772	C	CYS B 173	33.497	34.183	9.200	1.00 30.92	B
ATOM	2773	O	CYS B 173	33.240	34.614	10.326	1.00 32.70	B
ATOM	2774	CB	CYS B 173	35.988	34.214	9.155	1.00 31.48	B
ATOM	2775	SG	CYS B 173	36.338	32.436	8.983	1.00 31.85	B
ATOM	2776	N	HIS B 174	32.748	33.288	8.578	1.00 30.26	B
ATOM	2777	CA	HIS B 174	31.524	32.754	9.152	1.00 29.72	B
ATOM	2778	CB	HIS B 174	30.401	32.977	8.128	1.00 30.80	B
ATOM	2779	CG	HIS B 174	29.030	32.625	8.615	1.00 32.90	B
ATOM	2780	CD2	HIS B 174	28.016	33.405	9.058	1.00 33.11	B
ATOM	2781	ND1	HIS B 174	28.551	31.332	8.621	1.00 34.85	B
ATOM	2782	CE1	HIS B 174	27.299	31.332	9.044	1.00 37.21	B
ATOM	2783	NE2	HIS B 174	26.950	32.577	9.316	1.00 34.95	B
ATOM	2784	C	HIS B 174	31.751	31.271	9.449	1.00 28.49	B
ATOM	2785	O	HIS B 174	32.080	30.494	8.554	1.00 27.69	B
ATOM	2786	N	VAL B 175	31.584	30.888	10.710	1.00 27.48	B
ATOM	2787	CA	VAL B 175	31.810	29.508	11.121	1.00 25.94	B
ATOM	2788	CB	VAL B 175	32.988	29.418	12.126	1.00 25.31	B
ATOM	2789	CG1	VAL B 175	33.147	27.982	12.629	1.00 21.10	B
ATOM	2790	CG2	VAL B 175	34.271	29.896	11.462	1.00 22.12	B
ATOM	2791	C	VAL B 175	30.606	28.821	11.748	1.00 26.58	B
ATOM	2792	O	VAL B 175	30.004	29.328	12.694	1.00 27.01	B
ATOM	2793	N	GLU B 176	30.274	27.652	11.212	1.00 27.17	B
ATOM	2794	CA	GLU B 176	29.168	26.846	11.712	1.00 28.51	B
ATOM	2795	CB	GLU B 176	28.166	26.573	10.588	1.00 32.35	B
ATOM	2796	CG	GLU B 176	27.454	27.827	10.082	1.00 38.87	B
ATOM	2797	CD	GLU B 176	26.776	27.616	8.735	1.00 42.45	B
ATOM	2798	OE1	GLU B 176	25.947	26.684	8.618	1.00 43.07	B
ATOM	2799	OE2	GLU B 176	27.075	28.386	7.794	1.00 42.94	B
ATOM	2800	C	GLU B 176	29.750	25.536	12.235	1.00 27.34	B
ATOM	2801	O	GLU B 176	30.576	24.900	11.574	1.00 26.12	B
ATOM	2802	N	HIS B 177	29.308	25.134	13.420	1.00 26.08	B
ATOM	2803	CA	HIS B 177	29.800	23.921	14.049	1.00 26.30	B
ATOM	2804	CB	HIS B 177	31.132	24.244	14.738	1.00 24.58	B
ATOM	2805	CG	HIS B 177	31.759	23.076	15.422	1.00 22.32	B
ATOM	2806	CD2	HIS B 177	32.646	22.156	14.977	1.00 21.05	B
ATOM	2807	ND1	HIS B 177	31.437	22.711	16.710	1.00 21.01	B

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ATOM	2808	CE1	HIS	B	177	32.097	21.613	17.030	1.00	23.72	B
ATOM	2809	NE2	HIS	B	177	32.838	21.255	15.995	1.00	23.87	B
ATOM	2810	C	HIS	B	177	28.762	23.413	15.057	1.00	27.87	B
ATOM	2811	O	HIS	B	177	28.059	24.205	15.672	1.00	29.54	B
ATOM	2812	N	PRO	B	178	28.654	22.085	15.237	1.00	29.57	B
ATOM	2813	CD	PRO	B	178	29.365	21.025	14.501	1.00	28.96	B
ATOM	2814	CA	PRO	B	178	27.687	21.497	16.175	1.00	31.71	B
ATOM	2815	CB	PRO	B	178	28.062	20.019	16.166	1.00	30.49	B
ATOM	2816	CG	PRO	B	178	28.503	19.810	14.769	1.00	30.01	B
ATOM	2817	C	PRO	B	178	27.649	22.071	17.595	1.00	33.29	B
ATOM	2818	O	PRO	B	178	26.619	22.020	18.256	1.00	35.00	B
ATOM	2819	N	SER	B	179	28.762	22.615	18.067	1.00	34.96	B
ATOM	2820	CA	SER	B	179	28.813	23.168	19.418	1.00	36.85	B
ATOM	2821	CB	SER	B	179	30.261	23.228	19.896	1.00	35.35	B
ATOM	2822	OG	SER	B	179	31.023	24.053	19.034	1.00	35.14	B
ATOM	2823	C	SER	B	179	28.206	24.564	19.522	1.00	38.40	B
ATOM	2824	O	SER	B	179	27.953	25.056	20.619	1.00	37.27	B
ATOM	2825	N	LEU	B	180	27.971	25.192	18.377	1.00	40.10	B
ATOM	2826	CA	LEU	B	180	27.434	26.545	18.340	1.00	41.36	B
ATOM	2827	CB	LEU	B	180	28.162	27.352	17.269	1.00	39.74	B
ATOM	2828	CG	LEU	B	180	29.677	27.432	17.422	1.00	39.93	B
ATOM	2829	CD1	LEU	B	180	30.286	28.013	16.157	1.00	39.41	B
ATOM	2830	CD2	LEU	B	180	30.021	28.279	18.636	1.00	39.61	B
ATOM	2831	C	LEU	B	180	25.944	26.633	18.078	1.00	43.85	B
ATOM	2832	O	LEU	B	180	25.449	26.125	17.072	1.00	44.25	B
ATOM	2833	N	GLN	B	181	25.230	27.289	18.984	1.00	47.20	B
ATOM	2834	CA	GLN	B	181	23.794	27.475	18.814	1.00	49.93	B
ATOM	2835	CB	GLN	B	181	23.158	27.956	20.121	1.00	52.00	B
ATOM	2836	CG	GLN	B	181	23.873	29.134	20.758	1.00	56.40	B
ATOM	2837	CD	GLN	B	181	23.263	29.538	22.084	1.00	59.03	B
ATOM	2838	OE1	GLN	B	181	22.087	29.908	22.153	1.00	60.55	B
ATOM	2839	NE2	GLN	B	181	24.059	29.468	23.149	1.00	58.44	B
ATOM	2840	C	GLN	B	181	23.635	28.522	17.715	1.00	49.23	B
ATOM	2841	O	GLN	B	181	22.712	28.465	16.906	1.00	49.91	B
ATOM	2842	N	SER	B	182	24.560	29.474	17.688	1.00	48.48	B
ATOM	2843	CA	SER	B	182	24.555	30.523	16.679	1.00	47.89	B
ATOM	2844	CB	SER	B	182	24.241	31.879	17.314	1.00	48.68	B
ATOM	2845	OG	SER	B	182	25.211	32.223	18.286	1.00	50.58	B
ATOM	2846	C	SER	B	182	25.938	30.550	16.038	1.00	45.93	B
ATOM	2847	O	SER	B	182	26.945	30.354	16.714	1.00	45.13	B
ATOM	2848	N	PRO	B	183	26.004	30.783	14.721	1.00	45.12	B
ATOM	2849	CD	PRO	B	183	24.911	31.096	13.784	1.00	44.93	B
ATOM	2850	CA	PRO	B	183	27.302	30.819	14.042	1.00	43.29	B
ATOM	2851	CB	PRO	B	183	26.923	31.070	12.581	1.00	43.70	B
ATOM	2852	CG	PRO	B	183	25.642	31.833	12.688	1.00	44.70	B
ATOM	2853	C	PRO	B	183	28.254	31.876	14.593	1.00	40.67	B
ATOM	2854	O	PRO	B	183	27.828	32.851	15.209	1.00	40.46	B
ATOM	2855	N	ILE	B	184	29.547	31.664	14.382	1.00	37.76	B
ATOM	2856	CA	ILE	B	184	30.550	32.607	14.842	1.00	35.88	B
ATOM	2857	CB	ILE	B	184	31.759	31.889	15.468	1.00	35.92	B
ATOM	2858	CG2	ILE	B	184	32.907	32.867	15.657	1.00	35.57	B
ATOM	2859	CG1	ILE	B	184	31.362	31.270	16.806	1.00	36.74	B
ATOM	2860	CD1	ILE	B	184	32.475	30.477	17.458	1.00	36.59	B
ATOM	2861	C	ILE	B	184	31.040	33.453	13.680	1.00	34.88	B
ATOM	2862	O	ILE	B	184	31.412	32.932	12.630	1.00	35.06	B
ATOM	2863	N	THR	B	185	31.043	34.764	13.876	1.00	34.50	B
ATOM	2864	CA	THR	B	185	31.500	35.675	12.845	1.00	34.32	B
ATOM	2865	CB	THR	B	185	30.356	36.592	12.341	1.00	35.40	B
ATOM	2866	OG1	THR	B	185	29.770	37.285	13.450	1.00	37.01	B
ATOM	2867	CG2	THR	B	185	29.286	35.774	11.631	1.00	35.73	B
ATOM	2868	C	THR	B	185	32.622	36.548	13.375	1.00	33.38	B
ATOM	2869	O	THR	B	185	32.559	37.050	14.494	1.00	32.86	B
ATOM	2870	N	VAL	B	186	33.652	36.713	12.560	1.00	32.69	B
ATOM	2871	CA	VAL	B	186	34.791	37.538	12.911	1.00	33.21	B
ATOM	2872	CB	VAL	B	186	36.041	36.683	13.155	1.00	33.39	B
ATOM	2873	CG1	VAL	B	186	37.212	37.570	13.516	1.00	33.93	B
ATOM	2874	CG2	VAL	B	186	35.766	35.674	14.262	1.00	33.67	B
ATOM	2875	C	VAL	B	186	35.023	38.454	11.721	1.00	34.68	B
ATOM	2876	O	VAL	B	186	35.060	37.997	10.579	1.00	32.50	B
ATOM	2877	N	GLU	B	187	35.172	39.746	11.988	1.00	36.30	B
ATOM	2878	CA	GLU	B	187	35.373	40.713	10.922	1.00	38.96	B
ATOM	2879	CB	GLU	B	187	34.484	41.937	11.154	1.00	40.90	B
ATOM	2880	CG	GLU	B	187	33.008	41.623	11.333	1.00	46.09	B
ATOM	2881	CD	GLU	B	187	32.146	42.876	11.421	1.00	48.81	B

ATOM	2882	OE1	GLU	B	187	30.909	42.739	11.545	1.00 51.77	B
ATOM	2883	OE2	GLU	B	187	32.701	43.997	11.363	1.00 49.79	B
ATOM	2884	C	GLU	B	187	36.816	41.175	10.784	1.00 39.59	B
ATOM	2885	O	GLU	B	187	37.637	40.998	11.684	1.00 39.84	B
ATOM	2886	N	TRP	B	188	37.113	41.765	9.635	1.00 39.59	B
ATOM	2887	CA	TRP	B	188	38.430	42.302	9.360	1.00 40.86	B
ATOM	2888	CB	TRP	B	188	39.339	41.252	8.736	1.00 38.70	B
ATOM	2889	CG	TRP	B	188	40.769	41.704	8.693	1.00 37.82	B
ATOM	2890	CD2	TRP	B	188	41.421	42.383	7.615	1.00 36.62	B
ATOM	2891	CE2	TRP	B	188	42.748	42.640	8.023	1.00 36.31	B
ATOM	2892	CE3	TRP	B	188	41.013	42.799	6.340	1.00 36.14	B
ATOM	2893	CD1	TRP	B	188	41.698	41.583	9.686	1.00 37.31	B
ATOM	2894	NE1	TRP	B	188	42.890	42.141	9.291	1.00 37.27	B
ATOM	2895	CZ2	TRP	B	188	43.673	43.296	7.204	1.00 37.17	B
ATOM	2896	CZ3	TRP	B	188	41.932	43.452	5.522	1.00 38.70	B
ATOM	2897	CH2	TRP	B	188	43.249	43.694	5.960	1.00 37.13	B
ATOM	2898	C	TRP	B	188	38.258	43.455	8.383	1.00 42.97	B
ATOM	2899	O	TRP	B	188	37.946	43.240	7.211	1.00 42.37	B
ATOM	2900	N	ARG	B	189	38.442	44.678	8.864	1.00 46.69	B
ATOM	2901	CA	ARG	B	189	38.303	45.842	7.999	1.00 50.32	B
ATOM	2902	CB	ARG	B	189	37.731	47.040	8.776	1.00 52.18	B
ATOM	2903	CG	ARG	B	189	38.615	47.590	9.893	1.00 56.00	B
ATOM	2904	CD	ARG	B	189	38.234	47.041	11.270	1.00 59.95	B
ATOM	2905	NE	ARG	B	189	38.639	45.650	11.479	1.00 63.62	B
ATOM	2906	CZ	ARG	B	189	39.903	45.236	11.559	1.00 64.33	B
ATOM	2907	NH1	ARG	B	189	40.899	46.105	11.447	1.00 65.45	B
ATOM	2908	NH2	ARG	B	189	40.172	43.951	11.760	1.00 64.46	B
ATOM	2909	C	ARG	B	189	39.664	46.192	7.412	1.00 50.56	B
ATOM	2910	O	ARG	B	189	40.680	46.119	8.100	1.00 50.34	B
ATOM	2911	N	ALA	B	190	39.684	46.554	6.135	1.00 52.30	B
ATOM	2912	CA	ALA	B	190	40.933	46.911	5.476	1.00 54.16	B
ATOM	2913	CB	ALA	B	190	40.846	46.592	3.987	1.00 55.33	B
ATOM	2914	C	ALA	B	190	41.238	48.392	5.679	1.00 55.19	B
ATOM	2915	O	ALA	B	190	40.300	49.147	6.023	1.00 54.90	B
ATOM	2916	OXT	ALA	B	190	42.408	48.782	5.481	1.00 56.19	B
ATOM	2917	C	LEU	C	1	32.073	1.033	33.225	1.00 35.70	C
ATOM	2918	O	LEU	C	1	33.091	1.607	33.619	1.00 35.87	C
ATOM	2919	N	LEU	C	1	29.791	1.906	32.702	1.00 36.17	C
ATOM	2920	CA	LEU	C	1	30.699	1.409	33.777	1.00 34.35	C
ATOM	2921	N	GLN	C	2	32.105	0.072	32.307	1.00 34.64	C
ATOM	2922	CA	GLN	C	2	33.374	-0.359	31.737	1.00 34.20	C
ATOM	2923	C	GLN	C	2	33.250	-0.823	30.294	1.00 33.55	C
ATOM	2924	O	GLN	C	2	32.373	-1.610	29.955	1.00 33.68	C
ATOM	2925	N	PRO	C	3	34.130	-0.329	29.418	1.00 33.74	C
ATOM	2926	CD	PRO	C	3	35.226	0.632	29.639	1.00 33.81	C
ATOM	2927	CA	PRO	C	3	34.064	-0.742	28.015	1.00 34.77	C
ATOM	2928	CB	PRO	C	3	35.027	0.222	27.329	1.00 34.33	C
ATOM	2929	CG	PRO	C	3	36.070	0.449	28.393	1.00 34.78	C
ATOM	2930	C	PRO	C	3	34.508	-2.195	27.890	1.00 34.42	C
ATOM	2931	O	PRO	C	3	35.435	-2.626	28.579	1.00 34.76	C
ATOM	2932	N	PHE	C	4	33.837	-2.947	27.024	1.00 31.97	C
ATOM	2933	CA	PHE	C	4	34.173	-4.355	26.812	1.00 32.26	C
ATOM	2934	CB	PHE	C	4	32.897	-5.193	26.632	1.00 34.22	C
ATOM	2935	CG	PHE	C	4	32.006	-5.235	27.852	1.00 37.02	C
ATOM	2936	CD1	PHE	C	4	32.481	-4.835	29.103	1.00 38.53	C
ATOM	2937	CD2	PHE	C	4	30.701	-5.726	27.756	1.00 40.29	C
ATOM	2938	CE1	PHE	C	4	31.673	-4.925	30.248	1.00 40.80	C
ATOM	2939	CE2	PHE	C	4	29.878	-5.824	28.891	1.00 41.19	C
ATOM	2940	CZ	PHE	C	4	30.369	-5.421	30.142	1.00 40.74	C
ATOM	2941	C	PHE	C	4	35.052	-4.483	25.571	1.00 29.17	C
ATOM	2942	O	PHE	C	4	34.655	-4.072	24.482	1.00 30.93	C
ATOM	2943	N	PRO	C	5	36.257	-5.059	25.715	1.00 26.63	C
ATOM	2944	CD	PRO	C	5	36.936	-5.421	26.974	1.00 24.97	C
ATOM	2945	CA	PRO	C	5	37.168	-5.217	24.577	1.00 23.69	C
ATOM	2946	CB	PRO	C	5	38.527	-5.052	25.227	1.00 23.66	C
ATOM	2947	CG	PRO	C	5	38.335	-5.832	26.504	1.00 23.13	C
ATOM	2948	C	PRO	C	5	37.043	-6.569	23.887	1.00 22.95	C
ATOM	2949	O	PRO	C	5	36.403	-7.475	24.404	1.00 22.96	C
ATOM	2950	N	GLN	C	6	37.666	-6.696	22.719	1.00 23.53	C
ATOM	2951	CA	GLN	C	6	37.659	-7.945	21.967	1.00 21.10	C
ATOM	2952	CB	GLN	C	6	37.506	-7.670	20.475	1.00 20.90	C
ATOM	2953	CG	GLN	C	6	36.170	-7.105	20.063	1.00 21.10	C
ATOM	2954	CD	GLN	C	6	36.074	-6.901	18.557	1.00 22.85	C
ATOM	2955	OE1	GLN	C	6	36.483	-7.760	17.773	1.00 23.94	C

ATOM	2956	NE2	GLN	C	6	35.525	-5.766	18.149	1.00	20.70	C
ATOM	2957	C	GLN	C	6	38.996	-8.637	22.204	1.00	20.71	C
ATOM	2958	O	GLN	C	6	40.046	-8.008	22.105	1.00	19.85	C
ATOM	2959	N	PRO	C	7	38.974	-9.932	22.548	1.00	21.37	C
ATOM	2960	CD	PRO	C	7	37.810	-10.710	23.017	1.00	21.21	C
ATOM	2961	CA	PRO	C	7	40.215	-10.673	22.790	1.00	21.62	C
ATOM	2962	CB	PRO	C	7	39.783	-11.730	23.795	1.00	21.96	C
ATOM	2963	CG	PRO	C	7	38.416	-12.085	23.297	1.00	20.65	C
ATOM	2964	C	PRO	C	7	40.741	-11.316	21.511	1.00	24.05	C
ATOM	2965	O	PRO	C	7	39.972	-11.577	20.588	1.00	22.84	C
ATOM	2966	N	GLU	C	8	42.051	-11.550	21.448	1.00	26.22	C
ATOM	2967	CA	GLU	C	8	42.631	-12.215	20.292	1.00	27.00	C
ATOM	2968	CB	GLU	C	8	44.038	-11.687	19.988	1.00	27.94	C
ATOM	2969	CG	GLU	C	8	44.803	-12.494	18.915	1.00	28.38	C
ATOM	2970	CD	GLU	C	8	44.043	-12.649	17.589	1.00	31.32	C
ATOM	2971	OE1	GLU	C	8	42.980	-13.309	17.564	1.00	31.69	C
ATOM	2972	OE2	GLU	C	8	44.514	-12.112	16.563	1.00	29.86	C
ATOM	2973	C	GLU	C	8	42.678	-13.691	20.676	1.00	28.48	C
ATOM	2974	O	GLU	C	8	42.937	-14.029	21.829	1.00	28.74	C
ATOM	2975	N	LEU	C	9	42.407	-14.571	19.721	1.00	30.08	C
ATOM	2976	CA	LEU	C	9	42.404	-15.998	20.002	1.00	31.21	C
ATOM	2977	CB	LEU	C	9	41.313	-16.688	19.183	1.00	32.12	C
ATOM	2978	CG	LEU	C	9	39.918	-16.072	19.302	1.00	33.78	C
ATOM	2979	CD1	LEU	C	9	38.941	-16.866	18.457	1.00	35.00	C
ATOM	2980	CD2	LEU	C	9	39.481	-16.061	20.761	1.00	35.59	C
ATOM	2981	C	LEU	C	9	43.748	-16.641	19.712	1.00	31.83	C
ATOM	2982	O	LEU	C	9	44.342	-16.415	18.658	1.00	30.94	C
ATOM	2983	N	PRO	C	10	44.256	-17.442	20.657	1.00	33.33	C
ATOM	2984	CD	PRO	C	10	43.774	-17.661	22.032	1.00	33.12	C
ATOM	2985	CA	PRO	C	10	45.545	-18.097	20.439	1.00	36.08	C
ATOM	2986	CB	PRO	C	10	45.926	-18.590	21.836	1.00	36.62	C
ATOM	2987	CG	PRO	C	10	44.598	-18.846	22.476	1.00	35.26	C
ATOM	2988	C	PRO	C	10	45.428	-19.229	19.430	1.00	37.51	C
ATOM	2989	O	PRO	C	10	44.495	-20.030	19.491	1.00	39.49	C
ATOM	2990	N	TYR	C	11	46.365	-19.269	18.488	1.00	38.68	C
ATOM	2991	CA	TYR	C	11	46.392	-20.305	17.463	1.00	40.24	C
ATOM	2992	C	TYR	C	11	47.834	-20.782	17.290	1.00	42.03	C
ATOM	2993	O	TYR	C	11	48.121	-21.967	17.586	1.00	42.72	C
ATOM	2994	OXT	TYR	C	11	48.665	-19.949	16.870	1.00	42.75	C
ATOM	2995	CB	VAL	D	2	76.722	40.050	4.030	1.00	35.81	D
ATOM	2996	CG1	VAL	D	2	77.537	40.465	2.823	1.00	36.64	D
ATOM	2997	CG2	VAL	D	2	76.313	38.577	3.893	1.00	37.71	D
ATOM	2998	C	VAL	D	2	76.622	40.298	6.537	1.00	31.61	D
ATOM	2999	O	VAL	D	2	75.696	39.494	6.653	1.00	31.96	D
ATOM	3000	N	VAL	D	2	78.625	39.207	5.418	1.00	32.12	D
ATOM	3001	CA	VAL	D	2	77.560	40.255	5.317	1.00	33.74	D
ATOM	3002	N	ALA	D	3	76.864	41.246	7.441	1.00	29.52	D
ATOM	3003	CA	ALA	D	3	76.053	41.379	8.653	1.00	27.92	D
ATOM	3004	CB	ALA	D	3	76.480	40.321	9.684	1.00	27.11	D
ATOM	3005	C	ALA	D	3	76.128	42.767	9.286	1.00	25.71	D
ATOM	3006	O	ALA	D	3	77.050	43.540	9.016	1.00	23.11	D
ATOM	3007	N	ASP	D	4	75.152	43.070	10.137	1.00	24.26	D
ATOM	3008	CA	ASP	D	4	75.109	44.354	10.825	1.00	24.77	D
ATOM	3009	CB	ASP	D	4	73.774	44.533	11.555	1.00	25.88	D
ATOM	3010	CG	ASP	D	4	72.595	44.668	10.611	1.00	26.24	D
ATOM	3011	OD1	ASP	D	4	71.449	44.489	11.080	1.00	24.74	D
ATOM	3012	OD2	ASP	D	4	72.811	44.961	9.416	1.00	28.25	D
ATOM	3013	C	ASP	D	4	76.230	44.407	11.857	1.00	25.96	D
ATOM	3014	O	ASP	D	4	76.882	45.437	12.027	1.00	26.40	D
ATOM	3015	N	HIS	D	5	76.440	43.290	12.549	1.00	24.52	D
ATOM	3016	CA	HIS	D	5	77.469	43.204	13.582	1.00	24.25	D
ATOM	3017	CB	HIS	D	5	76.836	43.302	14.972	1.00	23.42	D
ATOM	3018	CG	HIS	D	5	76.138	44.599	15.231	1.00	26.12	D
ATOM	3019	CD2	HIS	D	5	76.567	45.879	15.126	1.00	26.16	D
ATOM	3020	ND1	HIS	D	5	74.830	44.667	15.657	1.00	25.67	D
ATOM	3021	CE1	HIS	D	5	74.481	45.932	15.799	1.00	26.53	D
ATOM	3022	NE2	HIS	D	5	75.516	46.688	15.484	1.00	25.96	D
ATOM	3023	C	HIS	D	5	78.241	41.895	13.492	1.00	22.88	D
ATOM	3024	O	HIS	D	5	77.657	40.835	13.258	1.00	22.31	D
ATOM	3025	N	VAL	D	6	79.552	41.980	13.691	1.00	20.27	D
ATOM	3026	CA	VAL	D	6	80.421	40.815	13.657	1.00	19.49	D
ATOM	3027	CB	VAL	D	6	81.419	40.866	12.486	1.00	20.45	D
ATOM	3028	CG1	VAL	D	6	82.357	39.674	12.564	1.00	19.85	D
ATOM	3029	CG2	VAL	D	6	80.674	40.869	11.161	1.00	25.29	D

ATOM	3030	C	VAL	D	6	81.223	40.792	14.944	1.00	18.77	D
ATOM	3031	O	VAL	D	6	81.767	41.812	15.352	1.00	17.70	D
ATOM	3032	N	ALA	D	7	81.304	39.626	15.575	1.00	18.23	D
ATOM	3033	CA	ALA	D	7	82.046	39.489	16.821	1.00	18.01	D
ATOM	3034	CB	ALA	D	7	81.080	39.452	18.006	1.00	17.61	D
ATOM	3035	C	ALA	D	7	82.899	38.239	16.838	1.00	17.37	D
ATOM	3036	O	ALA	D	7	82.568	37.242	16.208	1.00	19.56	D
ATOM	3037	N	SER	D	8	84.008	38.306	17.562	1.00	17.07	D
ATOM	3038	CA	SER	D	8	84.892	37.158	17.712	1.00	15.46	D
ATOM	3039	CB	SER	D	8	86.297	37.455	17.202	1.00	12.56	D
ATOM	3040	OG	SER	D	8	86.324	37.492	15.789	1.00	18.97	D
ATOM	3041	C	SER	D	8	84.932	36.904	19.201	1.00	16.39	D
ATOM	3042	O	SER	D	8	85.613	37.614	19.951	1.00	15.61	D
ATOM	3043	N	TYR	D	9	84.144	35.930	19.637	1.00	17.58	D
ATOM	3044	CA	TYR	D	9	84.096	35.587	21.044	1.00	18.51	D
ATOM	3045	CB	TYR	D	9	82.698	35.133	21.444	1.00	17.92	D
ATOM	3046	CG	TYR	D	9	81.730	36.290	21.362	1.00	17.41	D
ATOM	3047	CD1	TYR	D	9	82.056	37.523	21.928	1.00	16.27	D
ATOM	3048	CE1	TYR	D	9	81.208	38.603	21.840	1.00	15.18	D
ATOM	3049	CD2	TYR	D	9	80.515	36.169	20.701	1.00	17.05	D
ATOM	3050	CE2	TYR	D	9	79.649	37.252	20.608	1.00	18.01	D
ATOM	3051	CZ	TYR	D	9	80.005	38.466	21.181	1.00	16.67	D
ATOM	3052	OH	TYR	D	9	79.157	39.543	21.104	1.00	20.30	D
ATOM	3053	C	TYR	D	9	85.120	34.508	21.115	1.00	19.92	D
ATOM	3054	O	TYR	D	9	84.856	33.323	21.337	1.00	17.21	D
ATOM	3055	N	GLY	D	10	86.321	34.989	20.843	1.00	22.61	D
ATOM	3056	CA	GLY	D	10	87.478	34.160	20.836	1.00	20.96	D
ATOM	3057	C	GLY	D	10	88.358	34.354	19.624	1.00	18.79	D
ATOM	3058	O	GLY	D	10	88.170	33.693	18.618	1.00	16.79	D
ATOM	3059	N	VAL	D	11	89.275	35.307	19.683	1.00	17.75	D
ATOM	3060	CA	VAL	D	11	90.256	35.394	18.616	1.00	16.92	D
ATOM	3061	CB	VAL	D	11	90.666	36.829	18.242	1.00	17.76	D
ATOM	3062	CG1	VAL	D	11	91.873	36.778	17.313	1.00	15.46	D
ATOM	3063	CG2	VAL	D	11	89.522	37.544	17.544	1.00	13.00	D
ATOM	3064	C	VAL	D	11	91.391	34.728	19.395	1.00	17.46	D
ATOM	3065	O	VAL	D	11	91.865	35.266	20.405	1.00	18.93	D
ATOM	3066	N	ASN	D	12	91.773	33.531	18.973	1.00	17.46	D
ATOM	3067	CA	ASN	D	12	92.831	32.779	19.644	1.00	18.01	D
ATOM	3068	CB	ASN	D	12	92.339	31.360	19.969	1.00	16.68	D
ATOM	3069	CG	ASN	D	12	91.179	31.356	20.955	1.00	16.27	D
ATOM	3070	OD1	ASN	D	12	91.346	30.989	22.115	1.00	14.97	D
ATOM	3071	ND2	ASN	D	12	90.000	31.779	20.497	1.00	14.97	D
ATOM	3072	C	ASN	D	12	94.061	32.699	18.759	1.00	18.74	D
ATOM	3073	O	ASN	D	12	93.963	32.373	17.578	1.00	19.66	D
ATOM	3074	N	LEU	D	13	95.221	32.969	19.344	1.00	20.75	D
ATOM	3075	CA	LEU	D	13	96.471	32.949	18.600	1.00	22.59	D
ATOM	3076	CB	LEU	D	13	96.841	34.387	18.234	1.00	24.32	D
ATOM	3077	CG	LEU	D	13	98.215	34.672	17.632	1.00	25.29	D
ATOM	3078	CD1	LEU	D	13	98.355	33.966	16.289	1.00	24.58	D
ATOM	3079	CD2	LEU	D	13	98.380	36.177	17.475	1.00	23.52	D
ATOM	3080	C	LEU	D	13	97.646	32.290	19.330	1.00	22.44	D
ATOM	3081	O	LEU	D	13	97.900	32.578	20.494	1.00	24.67	D
ATOM	3082	N	TYR	D	14	98.350	31.397	18.641	1.00	23.69	D
ATOM	3083	CA	TYR	D	14	99.535	30.740	19.196	1.00	25.57	D
ATOM	3084	CB	TYR	D	14	99.223	29.360	19.765	1.00	26.53	D
ATOM	3085	CG	TYR	D	14	100.445	28.712	20.383	1.00	28.87	D
ATOM	3086	CD1	TYR	D	14	100.872	29.057	21.668	1.00	28.57	D
ATOM	3087	CE1	TYR	D	14	102.032	28.500	22.218	1.00	27.29	D
ATOM	3088	CD2	TYR	D	14	101.209	27.793	19.664	1.00	29.65	D
ATOM	3089	CE2	TYR	D	14	102.369	27.235	20.204	1.00	26.94	D
ATOM	3090	CZ	TYR	D	14	102.773	27.592	21.477	1.00	27.22	D
ATOM	3091	OH	TYR	D	14	103.914	27.039	22.008	1.00	29.69	D
ATOM	3092	C	TYR	D	14	100.553	30.574	18.074	1.00	26.73	D
ATOM	3093	O	TYR	D	14	100.210	30.128	16.980	1.00	27.22	D
ATOM	3094	N	GLN	D	15	101.800	30.945	18.338	1.00	26.92	D
ATOM	3095	CA	GLN	D	15	102.847	30.820	17.332	1.00	27.70	D
ATOM	3096	CB	GLN	D	15	103.164	32.179	16.710	1.00	27.39	D
ATOM	3097	CG	GLN	D	15	103.534	33.251	17.704	1.00	27.78	D
ATOM	3098	CD	GLN	D	15	103.806	34.590	17.044	1.00	27.70	D
ATOM	3099	OE1	GLN	D	15	103.723	35.638	17.685	1.00	31.07	D
ATOM	3100	NE2	GLN	D	15	104.142	34.562	15.763	1.00	25.83	D
ATOM	3101	C	GLN	D	15	104.097	30.222	17.952	1.00	28.40	D
ATOM	3102	O	GLN	D	15	104.368	30.416	19.141	1.00	28.81	D
ATOM	3103	N	SER	D	16	104.852	29.488	17.143	1.00	27.95	D

ATOM	3104	CA	SER	D	16	106.070	28.834	17.611	1.00	28.04	D
ATOM	3105	CB	SER	D	16	106.613	27.887	16.534	1.00	25.04	D
ATOM	3106	OG	SER	D	16	106.879	28.581	15.330	1.00	26.28	D
ATOM	3107	C	SER	D	16	107.155	29.824	18.024	1.00	27.77	D
ATOM	3108	O	SER	D	16	107.922	29.558	18.946	1.00	26.81	D
ATOM	3109	N	TYR	D	17	107.221	30.965	17.351	1.00	29.70	D
ATOM	3110	CA	TYR	D	17	108.228	31.953	17.694	1.00	32.41	D
ATOM	3111	CB	TYR	D	17	108.248	33.086	16.672	1.00	35.15	D
ATOM	3112	CG	TYR	D	17	109.440	33.986	16.864	1.00	40.80	D
ATOM	3113	CD1	TYR	D	17	110.719	33.556	16.508	1.00	43.28	D
ATOM	3114	CE1	TYR	D	17	111.836	34.345	16.743	1.00	44.62	D
ATOM	3115	CD2	TYR	D	17	109.308	35.235	17.460	1.00	40.97	D
ATOM	3116	CE2	TYR	D	17	110.419	36.032	17.702	1.00	44.83	D
ATOM	3117	CZ	TYR	D	17	111.679	35.580	17.341	1.00	45.74	D
ATOM	3118	OH	TYR	D	17	112.788	36.353	17.590	1.00	49.39	D
ATOM	3119	C	TYR	D	17	107.954	32.525	19.084	1.00	33.13	D
ATOM	3120	O	TYR	D	17	106.888	33.092	19.332	1.00	32.77	D
ATOM	3121	N	GLY	D	18	108.930	32.383	19.981	1.00	32.74	D
ATOM	3122	CA	GLY	D	18	108.780	32.867	21.341	1.00	31.76	D
ATOM	3123	C	GLY	D	18	108.958	31.716	22.311	1.00	32.63	D
ATOM	3124	O	GLY	D	18	110.005	31.600	22.948	1.00	34.20	D
ATOM	3125	N	PRO	D	19	107.946	30.840	22.452	1.00	33.13	D
ATOM	3126	CD	PRO	D	19	108.029	29.606	23.256	1.00	31.73	D
ATOM	3127	CA	PRO	D	19	106.663	30.906	21.741	1.00	32.71	D
ATOM	3128	CB	PRO	D	19	106.115	29.492	21.903	1.00	33.20	D
ATOM	3129	CG	PRO	D	19	106.591	29.128	23.280	1.00	31.76	D
ATOM	3130	C	PRO	D	19	105.768	31.948	22.406	1.00	32.52	D
ATOM	3131	O	PRO	D	19	105.970	32.282	23.568	1.00	33.11	D
ATOM	3132	N	SER	D	20	104.786	32.463	21.676	1.00	31.92	D
ATOM	3133	CA	SER	D	20	103.886	33.455	22.246	1.00	30.99	D
ATOM	3134	CB	SER	D	20	104.287	34.867	21.795	1.00	30.92	D
ATOM	3135	OG	SER	D	20	104.263	34.988	20.381	1.00	33.16	D
ATOM	3136	C	SER	D	20	102.441	33.172	21.852	1.00	30.01	D
ATOM	3137	O	SER	D	20	102.179	32.428	20.902	1.00	29.42	D
ATOM	3138	N	GLY	D	21	101.512	33.763	22.598	1.00	27.60	D
ATOM	3139	CA	GLY	D	21	100.101	33.580	22.318	1.00	25.70	D
ATOM	3140	C	GLY	D	21	99.309	34.836	22.632	1.00	24.66	D
ATOM	3141	O	GLY	D	21	99.848	35.798	23.187	1.00	23.84	D
ATOM	3142	N	GLN	D	22	98.030	34.834	22.268	1.00	22.55	D
ATOM	3143	CA	GLN	D	22	97.149	35.974	22.527	1.00	20.16	D
ATOM	3144	CB	GLN	D	22	97.301	37.049	21.445	1.00	18.28	D
ATOM	3145	CG	GLN	D	22	96.416	38.284	21.672	1.00	18.60	D
ATOM	3146	CD	GLN	D	22	96.513	39.327	20.562	1.00	18.36	D
ATOM	3147	OE1	GLN	D	22	97.379	40.207	20.587	1.00	19.82	D
ATOM	3148	NE2	GLN	D	22	95.617	39.232	19.582	1.00	17.69	D
ATOM	3149	C	GLN	D	22	95.699	35.517	22.561	1.00	18.61	D
ATOM	3150	O	GLN	D	22	95.301	34.638	21.790	1.00	17.26	D
ATOM	3151	N	TYR	D	23	94.926	36.097	23.475	1.00	16.42	D
ATOM	3152	CA	TYR	D	23	93.507	35.785	23.592	1.00	16.21	D
ATOM	3153	CB	TYR	D	23	93.212	34.839	24.762	1.00	14.97	D
ATOM	3154	CG	TYR	D	23	91.750	34.438	24.798	1.00	14.24	D
ATOM	3155	CD1	TYR	D	23	91.309	33.318	24.109	1.00	14.49	D
ATOM	3156	CE1	TYR	D	23	89.969	33.004	24.029	1.00	14.23	D
ATOM	3157	CD2	TYR	D	23	90.795	35.240	25.421	1.00	13.21	D
ATOM	3158	CE2	TYR	D	23	89.443	34.934	25.344	1.00	13.08	D
ATOM	3159	CZ	TYR	D	23	89.039	33.814	24.647	1.00	12.88	D
ATOM	3160	OH	TYR	D	23	87.710	33.471	24.566	1.00	16.44	D
ATOM	3161	C	TYR	D	23	92.751	37.089	23.806	1.00	15.56	D
ATOM	3162	O	TYR	D	23	93.014	37.817	24.763	1.00	16.57	D
ATOM	3163	N	THR	D	24	91.811	37.377	22.914	1.00	14.11	D
ATOM	3164	CA	THR	D	24	91.026	38.598	22.995	1.00	13.31	D
ATOM	3165	CB	THR	D	24	91.606	39.692	22.071	1.00	16.07	D
ATOM	3166	OG1	THR	D	24	91.682	39.176	20.734	1.00	17.94	D
ATOM	3167	CG2	THR	D	24	92.992	40.116	22.514	1.00	13.19	D
ATOM	3168	C	THR	D	24	89.604	38.342	22.519	1.00	12.68	D
ATOM	3169	O	THR	D	24	89.306	37.287	21.994	1.00	15.13	D
ATOM	3170	N	HIS	D	25	88.726	39.312	22.727	1.00	13.47	D
ATOM	3171	CA	HIS	D	25	87.360	39.224	22.229	1.00	13.83	D
ATOM	3172	CB	HIS	D	25	86.326	39.132	23.346	1.00	11.26	D
ATOM	3173	CG	HIS	D	25	86.053	37.727	23.785	1.00	14.42	D
ATOM	3174	CD2	HIS	D	25	86.815	36.610	23.723	1.00	12.09	D
ATOM	3175	ND1	HIS	D	25	84.876	37.351	24.392	1.00	15.93	D
ATOM	3176	CE1	HIS	D	25	84.922	36.064	24.685	1.00	14.24	D
ATOM	3177	NE2	HIS	D	25	86.089	35.591	24.289	1.00	13.67	D

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ATOM	3178	C	HIS D	25	87.158	40.495	21.436	1.00	13.30	D
ATOM	3179	O	HIS D	25	87.573	41.563	21.859	1.00	13.77	D
ATOM	3180	N	GLU D	26	86.544	40.376	20.271	1.00	15.40	D
ATOM	3181	CA	GLU D	26	86.318	41.540	19.434	1.00	16.53	D
ATOM	3182	CB	GLU D	26	87.109	41.396	18.133	1.00	14.47	D
ATOM	3183	CG	GLU D	26	88.627	41.460	18.277	1.00	14.81	D
ATOM	3184	CD	GLU D	26	89.341	41.205	16.947	1.00	19.22	D
ATOM	3185	OE1	GLU D	26	88.726	41.429	15.884	1.00	22.84	D
ATOM	3186	OE2	GLU D	26	90.512	40.792	16.953	1.00	17.41	D
ATOM	3187	C	GLU D	26	84.841	41.721	19.111	1.00	17.28	D
ATOM	3188	O	GLU D	26	84.073	40.760	19.100	1.00	16.62	D
ATOM	3189	N	PHE D	27	84.455	42.971	18.879	1.00	19.63	D
ATOM	3190	CA	PHE D	27	83.092	43.313	18.494	1.00	19.71	D
ATOM	3191	CB	PHE D	27	82.231	43.722	19.684	1.00	21.05	D
ATOM	3192	CG	PHE D	27	80.758	43.816	19.348	1.00	24.29	D
ATOM	3193	CD1	PHE D	27	79.971	42.668	19.278	1.00	23.22	D
ATOM	3194	CD2	PHE D	27	80.169	45.047	19.073	1.00	22.47	D
ATOM	3195	CE1	PHE D	27	78.617	42.744	18.940	1.00	24.89	D
ATOM	3196	CE2	PHE D	27	78.818	45.132	18.733	1.00	24.72	D
ATOM	3197	CZ	PHE D	27	78.041	43.980	18.667	1.00	22.80	D
ATOM	3198	C	PHE D	27	83.182	44.482	17.532	1.00	18.41	D
ATOM	3199	O	PHE D	27	83.700	45.545	17.879	1.00	19.21	D
ATOM	3200	N	ASP D	28	82.680	44.272	16.321	1.00	18.46	D
ATOM	3201	CA	ASP D	28	82.700	45.284	15.272	1.00	18.63	D
ATOM	3202	CB	ASP D	28	81.702	46.404	15.568	1.00	19.29	D
ATOM	3203	CG	ASP D	28	80.268	45.981	15.305	1.00	22.52	D
ATOM	3204	OD1	ASP D	28	80.076	44.885	14.738	1.00	23.13	D
ATOM	3205	OD2	ASP D	28	79.333	46.736	15.651	1.00	24.61	D
ATOM	3206	C	ASP D	28	84.075	45.865	15.037	1.00	17.83	D
ATOM	3207	O	ASP D	28	84.225	47.069	14.860	1.00	20.60	D
ATOM	3208	N	GLY D	29	85.079	44.997	15.042	1.00	18.44	D
ATOM	3209	CA	GLY D	29	86.439	45.431	14.788	1.00	19.49	D
ATOM	3210	C	GLY D	29	87.218	46.011	15.949	1.00	18.93	D
ATOM	3211	O	GLY D	29	88.382	46.359	15.784	1.00	19.51	D
ATOM	3212	N	ASP D	30	86.595	46.122	17.117	1.00	17.91	D
ATOM	3213	CA	ASP D	30	87.279	46.667	18.288	1.00	17.21	D
ATOM	3214	CB	ASP D	30	86.499	47.858	18.831	1.00	15.85	D
ATOM	3215	CG	ASP D	30	86.594	49.060	17.924	1.00	18.96	D
ATOM	3216	OD1	ASP D	30	87.731	49.515	17.668	1.00	18.56	D
ATOM	3217	OD2	ASP D	30	85.541	49.544	17.466	1.00	19.00	D
ATOM	3218	C	ASP D	30	87.491	45.629	19.389	1.00	17.20	D
ATOM	3219	O	ASP D	30	86.651	44.763	19.621	1.00	15.68	D
ATOM	3220	N	GLU D	31	88.629	45.739	20.062	1.00	18.79	D
ATOM	3221	CA	GLU D	31	89.015	44.829	21.131	1.00	17.52	D
ATOM	3222	CB	GLU D	31	90.531	44.947	21.363	1.00	19.03	D
ATOM	3223	CG	GLU D	31	91.074	44.215	22.579	1.00	22.08	D
ATOM	3224	CD	GLU D	31	92.596	44.254	22.653	1.00	25.29	D
ATOM	3225	OE1	GLU D	31	93.198	45.159	22.041	1.00	26.54	D
ATOM	3226	OE2	GLU D	31	93.193	43.387	23.331	1.00	25.19	D
ATOM	3227	C	GLU D	31	88.248	45.109	22.421	1.00	17.80	D
ATOM	3228	O	GLU D	31	88.360	46.195	23.004	1.00	16.81	D
ATOM	3229	N	GLN D	32	87.478	44.118	22.862	1.00	15.25	D
ATOM	3230	CA	GLN D	32	86.685	44.230	24.085	1.00	15.53	D
ATOM	3231	CB	GLN D	32	85.502	43.260	24.044	1.00	12.86	D
ATOM	3232	CG	GLN D	32	84.391	43.680	23.101	1.00	13.72	D
ATOM	3233	CD	GLN D	32	83.233	42.708	23.111	1.00	16.53	D
ATOM	3234	OE1	GLN D	32	83.407	41.526	22.838	1.00	20.27	D
ATOM	3235	NE2	GLN D	32	82.044	43.203	23.423	1.00	17.48	D
ATOM	3236	C	GLN D	32	87.528	43.956	25.329	1.00	16.00	D
ATOM	3237	O	GLN D	32	87.356	44.603	26.366	1.00	15.18	D
ATOM	3238	N	PHE D	33	88.423	42.981	25.222	1.00	16.17	D
ATOM	3239	CA	PHE D	33	89.315	42.638	26.321	1.00	15.74	D
ATOM	3240	CB	PHE D	33	88.520	42.083	27.515	1.00	15.40	D
ATOM	3241	CG	PHE D	33	87.969	40.693	27.307	1.00	15.83	D
ATOM	3242	CD1	PHE D	33	88.781	39.572	27.480	1.00	16.23	D
ATOM	3243	CD2	PHE D	33	86.625	40.503	26.977	1.00	17.27	D
ATOM	3244	CE1	PHE D	33	88.262	38.282	27.332	1.00	15.79	D
ATOM	3245	CE2	PHE D	33	86.088	39.218	26.827	1.00	15.20	D
ATOM	3246	CZ	PHE D	33	86.909	38.108	27.006	1.00	17.77	D
ATOM	3247	C	PHE D	33	90.330	41.614	25.860	1.00	15.28	D
ATOM	3248	O	PHE D	33	90.157	40.979	24.825	1.00	15.16	D
ATOM	3249	N	TYR D	34	91.405	41.476	26.620	1.00	15.54	D
ATOM	3250	CA	TYR D	34	92.414	40.480	26.314	1.00	16.00	D
ATOM	3251	CB	TYR D	34	93.649	41.124	25.670	1.00	17.46	D

ATOM	3252	CG	TYR D	34	94.508	41.970	26.588	1.00	20.90	D
ATOM	3253	CD1	TYR D	34	95.488	41.390	27.391	1.00	21.91	D
ATOM	3254	CE1	TYR D	34	96.295	42.174	28.221	1.00	24.17	D
ATOM	3255	CD2	TYR D	34	94.351	43.354	26.638	1.00	20.26	D
ATOM	3256	CE2	TYR D	34	95.147	44.141	27.463	1.00	24.97	D
ATOM	3257	CZ	TYR D	34	96.117	43.546	28.251	1.00	23.87	D
ATOM	3258	OH	TYR D	34	96.904	44.326	29.065	1.00	26.29	D
ATOM	3259	C	TYR D	34	92.766	39.836	27.642	1.00	16.56	D
ATOM	3260	O	TYR D	34	92.476	40.386	28.699	1.00	15.36	D
ATOM	3261	N	VAL D	35	93.354	38.653	27.586	1.00	18.29	D
ATOM	3262	CA	VAL D	35	93.768	37.971	28.795	1.00	19.11	D
ATOM	3263	CB	VAL D	35	93.257	36.514	28.842	1.00	17.61	D
ATOM	3264	CG1	VAL D	35	93.910	35.780	29.992	1.00	17.99	D
ATOM	3265	CG2	VAL D	35	91.744	36.493	29.003	1.00	17.82	D
ATOM	3266	C	VAL D	35	95.290	37.950	28.813	1.00	19.96	D
ATOM	3267	O	VAL D	35	95.914	37.492	27.866	1.00	17.73	D
ATOM	3268	N	ASP D	36	95.883	38.473	29.880	1.00	22.63	D
ATOM	3269	CA	ASP D	36	97.333	38.456	30.005	1.00	24.79	D
ATOM	3270	CB	ASP D	36	97.795	39.409	31.106	1.00	26.41	D
ATOM	3271	CG	ASP D	36	99.298	39.574	31.131	1.00	30.12	D
ATOM	3272	OD1	ASP D	36	100.002	38.547	31.252	1.00	32.04	D
ATOM	3273	OD2	ASP D	36	99.776	40.726	31.028	1.00	32.20	D
ATOM	3274	C	ASP D	36	97.650	37.011	30.389	1.00	25.23	D
ATOM	3275	O	ASP D	36	97.349	36.575	31.502	1.00	25.21	D
ATOM	3276	N	LEU D	37	98.236	36.272	29.455	1.00	23.64	D
ATOM	3277	CA	LEU D	37	98.549	34.870	29.676	1.00	25.25	D
ATOM	3278	CB	LEU D	37	98.992	34.232	28.355	1.00	21.08	D
ATOM	3279	CG	LEU D	37	97.955	34.360	27.225	1.00	20.24	D
ATOM	3280	CD1	LEU D	37	98.568	33.934	25.899	1.00	17.23	D
ATOM	3281	CD2	LEU D	37	96.730	33.516	27.541	1.00	19.11	D
ATOM	3282	C	LEU D	37	99.590	34.626	30.770	1.00	27.73	D
ATOM	3283	O	LEU D	37	99.464	33.682	31.554	1.00	27.92	D
ATOM	3284	N	GLY D	38	100.608	35.474	30.837	1.00	29.31	D
ATOM	3285	CA	GLY D	38	101.629	35.292	31.851	1.00	30.44	D
ATOM	3286	C	GLY D	38	101.141	35.640	33.242	1.00	32.52	D
ATOM	3287	O	GLY D	38	101.502	34.986	34.220	1.00	34.37	D
ATOM	3288	N	ARG D	39	100.309	36.669	33.335	1.00	35.10	D
ATOM	3289	CA	ARG D	39	99.786	37.103	34.623	1.00	36.92	D
ATOM	3290	CB	ARG D	39	99.693	38.632	34.653	1.00	39.96	D
ATOM	3291	CG	ARG D	39	101.011	39.318	34.301	1.00	44.57	D
ATOM	3292	CD	ARG D	39	101.006	40.798	34.667	1.00	49.71	D
ATOM	3293	NE	ARG D	39	102.240	41.484	34.270	1.00	53.08	D
ATOM	3294	CZ	ARG D	39	103.460	41.164	34.698	1.00	55.33	D
ATOM	3295	NH1	ARG D	39	103.635	40.158	35.546	1.00	56.98	D
ATOM	3296	NH2	ARG D	39	104.512	41.859	34.282	1.00	56.80	D
ATOM	3297	C	ARG D	39	98.429	36.476	34.924	1.00	35.86	D
ATOM	3298	O	ARG D	39	97.886	36.630	36.022	1.00	35.27	D
ATOM	3299	N	LYS D	40	97.893	35.757	33.944	1.00	34.51	D
ATOM	3300	CA	LYS D	40	96.602	35.095	34.090	1.00	33.49	D
ATOM	3301	CB	LYS D	40	96.714	33.939	35.088	1.00	34.77	D
ATOM	3302	CG	LYS D	40	95.482	33.040	35.133	1.00	41.38	D
ATOM	3303	CD	LYS D	40	95.703	31.839	36.046	1.00	45.02	D
ATOM	3304	CE	LYS D	40	94.443	31.001	36.185	1.00	46.54	D
ATOM	3305	NZ	LYS D	40	94.652	29.853	37.112	1.00	48.98	D
ATOM	3306	C	LYS D	40	95.511	36.064	34.542	1.00	30.95	D
ATOM	3307	O	LYS D	40	94.780	35.794	35.492	1.00	28.23	D
ATOM	3308	N	GLU D	41	95.401	37.197	33.858	1.00	30.54	D
ATOM	3309	CA	GLU D	41	94.384	38.175	34.210	1.00	30.41	D
ATOM	3310	CB	GLU D	41	94.980	39.302	35.078	1.00	34.10	D
ATOM	3311	CG	GLU D	41	96.180	40.034	34.488	1.00	41.52	D
ATOM	3312	CD	GLU D	41	96.834	40.997	35.482	1.00	45.72	D
ATOM	3313	OE1	GLU D	41	97.826	41.665	35.108	1.00	48.68	D
ATOM	3314	OE2	GLU D	41	96.362	41.086	36.638	1.00	47.60	D
ATOM	3315	C	GLU D	41	93.651	38.766	33.014	1.00	28.03	D
ATOM	3316	O	GLU D	41	94.220	38.981	31.940	1.00	25.49	D
ATOM	3317	N	THR D	42	92.364	39.006	33.226	1.00	25.48	D
ATOM	3318	CA	THR D	42	91.488	39.582	32.224	1.00	23.42	D
ATOM	3319	CB	THR D	42	90.035	39.187	32.511	1.00	22.07	D
ATOM	3320	OG1	THR D	42	89.927	37.761	32.468	1.00	18.54	D
ATOM	3321	CG2	THR D	42	89.087	39.817	31.497	1.00	20.32	D
ATOM	3322	C	THR D	42	91.615	41.098	32.301	1.00	22.29	D
ATOM	3323	O	THR D	42	91.492	41.680	33.373	1.00	21.54	D
ATOM	3324	N	VAL D	43	91.874	41.736	31.167	1.00	21.50	D
ATOM	3325	CA	VAL D	43	92.004	43.183	31.136	1.00	19.88	D

ATOM	3326	CB	VAL	D	43	93.428	43.584	30.697	1.00	21.56	D
ATOM	3327	CG1	VAL	D	43	93.620	45.091	30.828	1.00	20.99	D
ATOM	3328	CG2	VAL	D	43	94.456	42.827	31.539	1.00	19.79	D
ATOM	3329	C	VAL	D	43	90.968	43.744	30.164	1.00	20.50	D
ATOM	3330	O	VAL	D	43	91.045	43.513	28.959	1.00	19.49	D
ATOM	3331	N	TRP	D	44	89.987	44.466	30.690	1.00	21.49	D
ATOM	3332	CA	TRP	D	44	88.946	45.028	29.836	1.00	22.88	D
ATOM	3333	CB	TRP	D	44	87.685	45.326	30.649	1.00	21.57	D
ATOM	3334	CG	TRP	D	44	87.167	44.129	31.372	1.00	21.99	D
ATOM	3335	CD2	TRP	D	44	86.280	43.125	30.854	1.00	22.20	D
ATOM	3336	CE2	TRP	D	44	86.119	42.150	31.862	1.00	22.19	D
ATOM	3337	CE3	TRP	D	44	85.611	42.951	29.634	1.00	20.96	D
ATOM	3338	CD1	TRP	D	44	87.492	43.736	32.633	1.00	23.17	D
ATOM	3339	NE1	TRP	D	44	86.868	42.548	32.937	1.00	23.70	D
ATOM	3340	CZ2	TRP	D	44	85.311	41.016	31.693	1.00	24.30	D
ATOM	3341	CZ3	TRP	D	44	84.807	41.824	29.461	1.00	22.81	D
ATOM	3342	CH2	TRP	D	44	84.666	40.870	30.487	1.00	24.05	D
ATOM	3343	C	TRP	D	44	89.425	46.291	29.143	1.00	23.92	D
ATOM	3344	O	TRP	D	44	90.081	47.131	29.759	1.00	24.50	D
ATOM	3345	N	CYS	D	45	89.098	46.417	27.859	1.00	24.24	D
ATOM	3346	CA	CYS	D	45	89.498	47.580	27.069	1.00	26.23	D
ATOM	3347	CB	CYS	D	45	89.951	47.141	25.672	1.00	25.96	D
ATOM	3348	SG	CYS	D	45	91.422	46.098	25.665	1.00	25.42	D
ATOM	3349	C	CYS	D	45	88.377	48.608	26.950	1.00	27.07	D
ATOM	3350	O	CYS	D	45	88.612	49.749	26.549	1.00	28.23	D
ATOM	3351	N	LEU	D	46	87.157	48.193	27.273	1.00	27.18	D
ATOM	3352	CA	LEU	D	46	86.002	49.087	27.232	1.00	28.16	D
ATOM	3353	CB	LEU	D	46	84.907	48.525	26.320	1.00	27.82	D
ATOM	3354	CG	LEU	D	46	84.142	49.460	25.372	1.00	30.22	D
ATOM	3355	CD1	LEU	D	46	82.792	48.827	25.040	1.00	29.72	D
ATOM	3356	CD2	LEU	D	46	83.928	50.827	25.994	1.00	31.10	D
ATOM	3357	C	LEU	D	46	85.504	49.138	28.675	1.00	28.73	D
ATOM	3358	O	LEU	D	46	85.049	48.133	29.216	1.00	28.92	D
ATOM	3359	N	PRO	D	47	85.601	50.309	29.318	1.00	29.35	D
ATOM	3360	CD	PRO	D	47	86.116	51.554	28.717	1.00	28.33	D
ATOM	3361	CA	PRO	D	47	85.182	50.533	30.709	1.00	29.01	D
ATOM	3362	CB	PRO	D	47	85.139	52.051	30.806	1.00	29.32	D
ATOM	3363	CG	PRO	D	47	86.307	52.447	29.929	1.00	30.61	D
ATOM	3364	C	PRO	D	47	83.879	49.875	31.169	1.00	28.51	D
ATOM	3365	O	PRO	D	47	83.867	49.151	32.163	1.00	28.22	D
ATOM	3366	N	VAL	D	48	82.784	50.126	30.458	1.00	28.05	D
ATOM	3367	CA	VAL	D	48	81.492	49.545	30.826	1.00	27.41	D
ATOM	3368	CB	VAL	D	48	80.406	49.918	29.810	1.00	26.31	D
ATOM	3369	CG1	VAL	D	48	79.955	51.345	30.027	1.00	30.25	D
ATOM	3370	CG2	VAL	D	48	80.949	49.744	28.398	1.00	26.11	D
ATOM	3371	C	VAL	D	48	81.490	48.022	30.961	1.00	26.77	D
ATOM	3372	O	VAL	D	48	80.622	47.462	31.627	1.00	27.43	D
ATOM	3373	N	LEU	D	49	82.449	47.353	30.332	1.00	25.75	D
ATOM	3374	CA	LEU	D	49	82.517	45.898	30.395	1.00	27.21	D
ATOM	3375	CB	LEU	D	49	83.237	45.354	29.153	1.00	27.47	D
ATOM	3376	CG	LEU	D	49	82.405	44.886	27.944	1.00	29.74	D
ATOM	3377	CD1	LEU	D	49	81.361	45.898	27.578	1.00	29.28	D
ATOM	3378	CD2	LEU	D	49	83.329	44.627	26.753	1.00	29.72	D
ATOM	3379	C	LEU	D	49	83.185	45.374	31.674	1.00	27.86	D
ATOM	3380	O	LEU	D	49	83.246	44.163	31.900	1.00	25.45	D
ATOM	3381	N	ARG	D	50	83.680	46.283	32.508	1.00	29.82	D
ATOM	3382	CA	ARG	D	50	84.319	45.892	33.768	1.00	32.18	D
ATOM	3383	CB	ARG	D	50	84.900	47.105	34.509	1.00	35.49	D
ATOM	3384	CG	ARG	D	50	86.010	47.890	33.824	1.00	40.53	D
ATOM	3385	CD	ARG	D	50	86.524	48.968	34.786	1.00	42.89	D
ATOM	3386	NE	ARG	D	50	87.297	50.017	34.125	1.00	46.26	D
ATOM	3387	CZ	ARG	D	50	88.484	49.836	33.555	1.00	46.43	D
ATOM	3388	NH1	ARG	D	50	89.049	48.636	33.564	1.00	46.42	D
ATOM	3389	NH2	ARG	D	50	89.100	50.857	32.968	1.00	43.78	D
ATOM	3390	C	ARG	D	50	83.283	45.247	34.690	1.00	31.58	D
ATOM	3391	O	ARG	D	50	83.631	44.577	35.664	1.00	31.56	D
ATOM	3392	N	GLN	D	51	82.009	45.476	34.397	1.00	30.22	D
ATOM	3393	CA	GLN	D	51	80.942	44.921	35.221	1.00	30.10	D
ATOM	3394	CB	GLN	D	51	79.610	45.592	34.880	1.00	31.37	D
ATOM	3395	CG	GLN	D	51	79.194	45.469	33.426	1.00	33.44	D
ATOM	3396	CD	GLN	D	51	77.888	46.188	33.144	1.00	37.07	D
ATOM	3397	OE1	GLN	D	51	76.835	45.824	33.678	1.00	36.72	D
ATOM	3398	NE2	GLN	D	51	77.951	47.222	32.309	1.00	34.55	D
ATOM	3399	C	GLN	D	51	80.830	43.411	35.049	1.00	29.51	D

ATOM	3400	O	GLN	D	51	80.291	42.721	35.911	1.00	29.09	D
ATOM	3401	N	PHE	D	52	81.342	42.899	33.935	1.00	28.19	D
ATOM	3402	CA	PHE	D	52	81.300	41.468	33.676	1.00	26.27	D
ATOM	3403	CB	PHE	D	52	81.218	41.188	32.178	1.00	25.00	D
ATOM	3404	CG	PHE	D	52	80.030	41.801	31.513	1.00	23.07	D
ATOM	3405	CD1	PHE	D	52	78.744	41.569	31.999	1.00	22.75	D
ATOM	3406	CD2	PHE	D	52	80.188	42.594	30.380	1.00	23.46	D
ATOM	3407	CE1	PHE	D	52	77.627	42.122	31.364	1.00	21.26	D
ATOM	3408	CE2	PHE	D	52	79.079	43.151	29.735	1.00	21.92	D
ATOM	3409	CZ	PHE	D	52	77.799	42.913	30.231	1.00	21.69	D
ATOM	3410	C	PHE	D	52	82.547	40.797	34.217	1.00	27.11	D
ATOM	3411	O	PHE	D	52	83.477	41.461	34.669	1.00	27.64	D
ATOM	3412	N	ARG	D	53	82.556	39.471	34.152	1.00	27.25	D
ATOM	3413	CA	ARG	D	53	83.683	38.672	34.609	1.00	28.31	D
ATOM	3414	CB	ARG	D	53	83.347	37.976	35.939	1.00	32.75	D
ATOM	3415	CG	ARG	D	53	83.263	38.921	37.143	1.00	40.59	D
ATOM	3416	CD	ARG	D	53	82.418	38.325	38.269	1.00	45.99	D
ATOM	3417	NE	ARG	D	53	81.007	38.229	37.892	1.00	52.14	D
ATOM	3418	CZ	ARG	D	53	80.172	39.265	37.808	1.00	53.70	D
ATOM	3419	NH1	ARG	D	53	80.597	40.493	38.080	1.00	53.85	D
ATOM	3420	NH2	ARG	D	53	78.910	39.071	37.440	1.00	54.61	D
ATOM	3421	C	ARG	D	53	84.007	37.624	33.548	1.00	25.73	D
ATOM	3422	O	ARG	D	53	83.120	37.103	32.875	1.00	23.84	D
ATOM	3423	N	PHE	D	54	85.290	37.335	33.387	1.00	23.47	D
ATOM	3424	CA	PHE	D	54	85.716	36.336	32.425	1.00	19.92	D
ATOM	3425	CB	PHE	D	54	86.159	36.980	31.113	1.00	15.46	D
ATOM	3426	CG	PHE	D	54	86.346	35.994	30.007	1.00	17.29	D
ATOM	3427	CD1	PHE	D	54	85.249	35.506	29.303	1.00	15.32	D
ATOM	3428	CD2	PHE	D	54	87.615	35.503	29.701	1.00	15.07	D
ATOM	3429	CE1	PHE	D	54	85.415	34.539	28.309	1.00	16.04	D
ATOM	3430	CE2	PHE	D	54	87.788	34.535	28.709	1.00	13.99	D
ATOM	3431	CZ	PHE	D	54	86.688	34.055	28.014	1.00	14.35	D
ATOM	3432	C	PHE	D	54	86.879	35.598	33.055	1.00	18.63	D
ATOM	3433	O	PHE	D	54	87.922	36.188	33.329	1.00	19.50	D
ATOM	3434	N	ASP	D	55	86.676	34.312	33.309	1.00	19.05	D
ATOM	3435	CA	ASP	D	55	87.689	33.466	33.921	1.00	19.33	D
ATOM	3436	CB	ASP	D	55	87.084	32.100	34.237	1.00	21.38	D
ATOM	3437	CG	ASP	D	55	88.090	31.138	34.832	1.00	24.95	D
ATOM	3438	OD1	ASP	D	55	89.264	31.528	35.021	1.00	27.01	D
ATOM	3439	OD2	ASP	D	55	87.703	29.985	35.112	1.00	27.48	D
ATOM	3440	C	ASP	D	55	88.863	33.323	32.955	1.00	19.84	D
ATOM	3441	O	ASP	D	55	88.741	32.691	31.904	1.00	18.07	D
ATOM	3442	N	PRO	D	56	90.024	33.909	33.311	1.00	19.36	D
ATOM	3443	CD	PRO	D	56	90.285	34.584	34.593	1.00	16.09	D
ATOM	3444	CA	PRO	D	56	91.240	33.867	32.486	1.00	18.34	D
ATOM	3445	CB	PRO	D	56	92.228	34.729	33.278	1.00	19.78	D
ATOM	3446	CG	PRO	D	56	91.792	34.517	34.692	1.00	18.66	D
ATOM	3447	C	PRO	D	56	91.770	32.468	32.206	1.00	18.30	D
ATOM	3448	O	PRO	D	56	92.583	32.277	31.299	1.00	17.41	D
ATOM	3449	N	GLN	D	57	91.304	31.489	32.977	1.00	18.31	D
ATOM	3450	CA	GLN	D	57	91.744	30.114	32.781	1.00	18.39	D
ATOM	3451	CB	GLN	D	57	91.314	29.233	33.963	1.00	19.94	D
ATOM	3452	CG	GLN	D	57	91.738	27.773	33.856	1.00	18.50	D
ATOM	3453	CD	GLN	D	57	93.252	27.603	33.765	1.00	23.86	D
ATOM	3454	OE1	GLN	D	57	94.000	28.110	34.612	1.00	23.68	D
ATOM	3455	NE2	GLN	D	57	93.709	26.885	32.739	1.00	19.56	D
ATOM	3456	C	GLN	D	57	91.174	29.555	31.480	1.00	20.01	D
ATOM	3457	O	GLN	D	57	91.733	28.618	30.903	1.00	19.26	D
ATOM	3458	N	PHE	D	58	90.059	30.113	31.016	1.00	19.19	D
ATOM	3459	CA	PHE	D	58	89.490	29.629	29.765	1.00	20.37	D
ATOM	3460	CB	PHE	D	58	88.178	30.347	29.427	1.00	18.69	D
ATOM	3461	CG	PHE	D	58	87.587	29.912	28.114	1.00	20.67	D
ATOM	3462	CD1	PHE	D	58	88.040	30.456	26.912	1.00	19.84	D
ATOM	3463	CD2	PHE	D	58	86.640	28.891	28.070	1.00	19.87	D
ATOM	3464	CE1	PHE	D	58	87.562	29.984	25.682	1.00	19.25	D
ATOM	3465	CE2	PHE	D	58	86.156	28.411	26.844	1.00	20.67	D
ATOM	3466	CZ	PHE	D	58	86.623	28.961	25.652	1.00	19.50	D
ATOM	3467	C	PHE	D	58	90.508	29.892	28.659	1.00	20.46	D
ATOM	3468	O	PHE	D	58	90.745	29.049	27.790	1.00	20.36	D
ATOM	3469	N	ALA	D	59	91.115	31.070	28.716	1.00	20.85	D
ATOM	3470	CA	ALA	D	59	92.111	31.477	27.736	1.00	21.87	D
ATOM	3471	CB	ALA	D	59	92.458	32.959	27.937	1.00	20.20	D
ATOM	3472	C	ALA	D	59	93.374	30.618	27.819	1.00	22.41	D
ATOM	3473	O	ALA	D	59	93.877	30.151	26.796	1.00	22.54	D

ATOM	3474	N	LEU D	60	93.890	30.409	29.030	1.00	21.24	D
ATOM	3475	CA	LEU D	60	95.101	29.601	29.188	1.00	22.31	D
ATOM	3476	CB	LEU D	60	95.501	29.474	30.663	1.00	22.79	D
ATOM	3477	CG	LEU D	60	96.063	30.698	31.393	1.00	25.87	D
ATOM	3478	CD1	LEU D	60	96.455	30.303	32.805	1.00	28.75	D
ATOM	3479	CD2	LEU D	60	97.270	31.223	30.670	1.00	28.42	D
ATOM	3480	C	LEU D	60	94.891	28.207	28.617	1.00	21.85	D
ATOM	3481	O	LEU D	60	95.731	27.691	27.875	1.00	22.48	D
ATOM	3482	N	THR D	61	93.763	27.600	28.966	1.00	19.32	D
ATOM	3483	CA	THR D	61	93.457	26.259	28.489	1.00	20.67	D
ATOM	3484	CB	THR D	61	92.175	25.721	29.158	1.00	20.04	D
ATOM	3485	OG1	THR D	61	92.419	25.539	30.558	1.00	23.09	D
ATOM	3486	CG2	THR D	61	91.759	24.393	28.546	1.00	21.15	D
ATOM	3487	C	THR D	61	93.283	26.240	26.974	1.00	19.50	D
ATOM	3488	O	THR D	61	93.805	25.363	26.288	1.00	18.76	D
ATOM	3489	N	ASN D	62	92.565	27.229	26.456	1.00	19.66	D
ATOM	3490	CA	ASN D	62	92.310	27.300	25.032	1.00	19.00	D
ATOM	3491	CB	ASN D	62	91.356	28.453	24.729	1.00	18.52	D
ATOM	3492	CG	ASN D	62	90.262	28.052	23.760	1.00	20.31	D
ATOM	3493	OD1	ASN D	62	89.726	26.942	23.833	1.00	19.27	D
ATOM	3494	ND2	ASN D	62	89.917	28.952	22.854	1.00	22.25	D
ATOM	3495	C	ASN D	62	93.599	27.445	24.244	1.00	19.63	D
ATOM	3496	O	ASN D	62	93.774	26.788	23.221	1.00	21.16	D
ATOM	3497	N	ILE D	63	94.509	28.290	24.724	1.00	19.68	D
ATOM	3498	CA	ILE D	63	95.779	28.481	24.033	1.00	18.76	D
ATOM	3499	CB	ILE D	63	96.587	29.660	24.645	1.00	18.72	D
ATOM	3500	CG2	ILE D	63	97.946	29.780	23.966	1.00	17.99	D
ATOM	3501	CG1	ILE D	63	95.813	30.968	24.471	1.00	17.09	D
ATOM	3502	CD1	ILE D	63	95.507	31.313	23.017	1.00	17.47	D
ATOM	3503	C	ILE D	63	96.613	27.195	24.094	1.00	18.86	D
ATOM	3504	O	ILE D	63	97.354	26.885	23.164	1.00	20.67	D
ATOM	3505	N	ALA D	64	96.497	26.448	25.188	1.00	18.22	D
ATOM	3506	CA	ALA D	64	97.244	25.193	25.316	1.00	20.33	D
ATOM	3507	CB	ALA D	64	97.039	24.574	26.708	1.00	17.30	D
ATOM	3508	C	ALA D	64	96.756	24.232	24.233	1.00	21.38	D
ATOM	3509	O	ALA D	64	97.536	23.459	23.677	1.00	23.44	D
ATOM	3510	N	VAL D	65	95.459	24.290	23.940	1.00	21.97	D
ATOM	3511	CA	VAL D	65	94.872	23.444	22.910	1.00	22.59	D
ATOM	3512	CB	VAL D	65	93.324	23.570	22.890	1.00	22.30	D
ATOM	3513	CG1	VAL D	65	92.744	22.781	21.728	1.00	17.73	D
ATOM	3514	CG2	VAL D	65	92.747	23.053	24.204	1.00	19.10	D
ATOM	3515	C	VAL D	65	95.441	23.832	21.541	1.00	23.65	D
ATOM	3516	O	VAL D	65	95.783	22.961	20.746	1.00	23.24	D
ATOM	3517	N	LEU D	66	95.552	25.133	21.271	1.00	25.03	D
ATOM	3518	CA	LEU D	66	96.102	25.580	19.991	1.00	26.10	D
ATOM	3519	CB	LEU D	66	96.104	27.111	19.870	1.00	23.98	D
ATOM	3520	CG	LEU D	66	94.826	27.953	19.969	1.00	25.20	D
ATOM	3521	CD1	LEU D	66	95.030	29.233	19.169	1.00	21.70	D
ATOM	3522	CD2	LEU D	66	93.629	27.211	19.435	1.00	26.16	D
ATOM	3523	C	LEU D	66	97.533	25.078	19.880	1.00	26.24	D
ATOM	3524	O	LEU D	66	97.971	24.667	18.816	1.00	27.10	D
ATOM	3525	N	LYS D	67	98.262	25.131	20.989	1.00	27.93	D
ATOM	3526	CA	LYS D	67	99.642	24.658	21.024	1.00	28.00	D
ATOM	3527	CB	LYS D	67	100.215	24.827	22.437	1.00	27.69	D
ATOM	3528	CG	LYS D	67	101.633	24.316	22.625	1.00	28.46	D
ATOM	3529	CD	LYS D	67	102.086	24.504	24.069	1.00	30.94	D
ATOM	3530	CE	LYS D	67	103.401	23.791	24.356	1.00	32.95	D
ATOM	3531	NZ	LYS D	67	104.517	24.279	23.503	1.00	35.64	D
ATOM	3532	C	LYS D	67	99.642	23.182	20.629	1.00	27.56	D
ATOM	3533	O	LYS D	67	100.414	22.759	19.767	1.00	27.65	D
ATOM	3534	N	HIS D	68	98.761	22.405	21.254	1.00	27.05	D
ATOM	3535	CA	HIS D	68	98.665	20.982	20.956	1.00	26.31	D
ATOM	3536	CB	HIS D	68	97.600	20.324	21.844	1.00	27.74	D
ATOM	3537	CG	HIS D	68	97.356	18.879	21.531	1.00	31.20	D
ATOM	3538	CD2	HIS D	68	97.801	17.748	22.130	1.00	31.26	D
ATOM	3539	ND1	HIS D	68	96.582	18.466	20.465	1.00	32.71	D
ATOM	3540	CE1	HIS D	68	96.560	17.146	20.423	1.00	31.32	D
ATOM	3541	NE2	HIS D	68	97.292	16.686	21.421	1.00	31.58	D
ATOM	3542	C	HIS D	68	98.341	20.757	19.483	1.00	25.27	D
ATOM	3543	O	HIS D	68	98.958	19.914	18.830	1.00	25.67	D
ATOM	3544	N	ASN D	69	97.386	21.521	18.959	1.00	22.00	D
ATOM	3545	CA	ASN D	69	96.986	21.398	17.561	1.00	23.20	D
ATOM	3546	CB	ASN D	69	95.706	22.210	17.307	1.00	23.27	D
ATOM	3547	CG	ASN D	69	94.447	21.504	17.805	1.00	24.20	D

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ATOM	3548	OD1	ASN	D	69	94.521	20.536	18.562	1.00	26.69	D
ATOM	3549	ND2	ASN	D	69	93.283	21.994	17.381	1.00	21.03	D
ATOM	3550	C	ASN	D	69	98.091	21.855	16.601	1.00	24.52	D
ATOM	3551	O	ASN	D	69	98.329	21.223	15.570	1.00	22.82	D
ATOM	3552	N	LEU	D	70	98.763	22.954	16.934	1.00	24.56	D
ATOM	3553	CA	LEU	D	70	99.831	23.459	16.078	1.00	26.89	D
ATOM	3554	CB	LEU	D	70	100.478	24.707	16.690	1.00	23.85	D
ATOM	3555	CG	LEU	D	70	101.619	25.306	15.857	1.00	22.71	D
ATOM	3556	CD1	LEU	D	70	101.082	25.776	14.519	1.00	19.18	D
ATOM	3557	CD2	LEU	D	70	102.254	26.472	16.592	1.00	23.62	D
ATOM	3558	C	LEU	D	70	100.900	22.388	15.882	1.00	28.63	D
ATOM	3559	O	LEU	D	70	101.413	22.210	14.780	1.00	27.56	D
ATOM	3560	N	ASN	D	71	101.224	21.687	16.967	1.00	31.13	D
ATOM	3561	CA	ASN	D	71	102.238	20.637	16.962	1.00	35.25	D
ATOM	3562	CB	ASN	D	71	102.393	20.052	18.370	1.00	35.30	D
ATOM	3563	CG	ASN	D	71	103.149	20.978	19.307	1.00	38.03	D
ATOM	3564	OD1	ASN	D	71	103.197	20.751	20.518	1.00	40.05	D
ATOM	3565	ND2	ASN	D	71	103.752	22.026	18.748	1.00	38.78	D
ATOM	3566	C	ASN	D	71	101.931	19.521	15.975	1.00	36.85	D
ATOM	3567	O	ASN	D	71	102.829	18.997	15.316	1.00	36.91	D
ATOM	3568	N	SER	D	72	100.660	19.157	15.876	1.00	38.08	D
ATOM	3569	CA	SER	D	72	100.261	18.104	14.961	1.00	39.44	D
ATOM	3570	CB	SER	D	72	98.847	17.623	15.306	1.00	40.69	D
ATOM	3571	OG	SER	D	72	98.529	16.427	14.611	1.00	44.84	D
ATOM	3572	C	SER	D	72	100.320	18.614	13.520	1.00	39.55	D
ATOM	3573	O	SER	D	72	100.798	17.915	12.625	1.00	38.61	D
ATOM	3574	N	LEU	D	73	99.846	19.839	13.305	1.00	40.64	D
ATOM	3575	CA	LEU	D	73	99.844	20.443	11.974	1.00	42.19	D
ATOM	3576	CB	LEU	D	73	99.085	21.768	11.990	1.00	42.17	D
ATOM	3577	CG	LEU	D	73	97.608	21.700	11.608	1.00	43.12	D
ATOM	3578	CD1	LEU	D	73	96.891	20.664	12.443	1.00	44.19	D
ATOM	3579	CD2	LEU	D	73	96.988	23.072	11.801	1.00	44.59	D
ATOM	3580	C	LEU	D	73	101.237	20.678	11.407	1.00	43.27	D
ATOM	3581	O	LEU	D	73	101.466	20.479	10.215	1.00	43.00	D
ATOM	3582	N	ILE	D	74	102.162	21.116	12.253	1.00	44.60	D
ATOM	3583	CA	ILE	D	74	103.529	21.364	11.812	1.00	46.44	D
ATOM	3584	CB	ILE	D	74	104.431	21.770	13.000	1.00	46.31	D
ATOM	3585	CG2	ILE	D	74	105.893	21.792	12.571	1.00	46.14	D
ATOM	3586	CG1	ILE	D	74	103.996	23.140	13.529	1.00	45.97	D
ATOM	3587	CD1	ILE	D	74	104.683	23.561	14.812	1.00	43.97	D
ATOM	3588	C	ILE	D	74	104.077	20.095	11.166	1.00	48.14	D
ATOM	3589	O	ILE	D	74	104.724	20.147	10.119	1.00	48.28	D
ATOM	3590	N	LYS	D	75	103.800	18.957	11.795	1.00	49.68	D
ATOM	3591	CA	LYS	D	75	104.252	17.669	11.290	1.00	51.82	D
ATOM	3592	CB	LYS	D	75	104.060	16.589	12.356	1.00	52.85	D
ATOM	3593	CG	LYS	D	75	104.856	16.839	13.621	1.00	54.78	D
ATOM	3594	CD	LYS	D	75	104.517	15.831	14.704	1.00	57.28	D
ATOM	3595	CE	LYS	D	75	105.222	16.170	16.010	1.00	58.75	D
ATOM	3596	NZ	LYS	D	75	104.803	15.266	17.116	1.00	59.97	D
ATOM	3597	C	LYS	D	75	103.499	17.276	10.023	1.00	52.37	D
ATOM	3598	O	LYS	D	75	104.106	17.086	8.972	1.00	52.78	D
ATOM	3599	N	ARG	D	76	102.177	17.171	10.124	1.00	52.67	D
ATOM	3600	CA	ARG	D	76	101.353	16.783	8.986	1.00	52.67	D
ATOM	3601	CB	ARG	D	76	99.911	16.546	9.439	1.00	53.54	D
ATOM	3602	CG	ARG	D	76	99.764	15.339	10.346	1.00	55.62	D
ATOM	3603	CD	ARG	D	76	98.310	15.011	10.639	1.00	58.29	D
ATOM	3604	NE	ARG	D	76	97.628	16.107	11.319	1.00	61.07	D
ATOM	3605	CZ	ARG	D	76	96.437	16.000	11.900	1.00	62.21	D
ATOM	3606	NH1	ARG	D	76	95.793	14.840	11.885	1.00	62.71	D
ATOM	3607	NH2	ARG	D	76	95.889	17.055	12.492	1.00	61.94	D
ATOM	3608	C	ARG	D	76	101.375	17.761	7.816	1.00	52.35	D
ATOM	3609	O	ARG	D	76	100.691	17.550	6.817	1.00	52.65	D
ATOM	3610	N	SER	D	77	102.160	18.824	7.932	1.00	52.02	D
ATOM	3611	CA	SER	D	77	102.255	19.807	6.856	1.00	51.87	D
ATOM	3612	CB	SER	D	77	101.945	21.212	7.379	1.00	50.95	D
ATOM	3613	OG	SER	D	77	102.975	21.668	8.239	1.00	48.11	D
ATOM	3614	C	SER	D	77	103.667	19.789	6.287	1.00	52.25	D
ATOM	3615	O	SER	D	77	104.028	20.633	5.464	1.00	51.67	D
ATOM	3616	N	ASN	D	78	104.455	18.814	6.731	1.00	52.79	D
ATOM	3617	CA	ASN	D	78	105.841	18.675	6.301	1.00	53.67	D
ATOM	3618	CB	ASN	D	78	105.912	18.364	4.797	1.00	55.53	D
ATOM	3619	CG	ASN	D	78	107.298	17.901	4.355	1.00	57.31	D
ATOM	3620	OD1	ASN	D	78	107.959	17.129	5.051	1.00	56.41	D
ATOM	3621	ND2	ASN	D	78	107.732	18.360	3.184	1.00	58.05	D

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ATOM	3622	C	ASN	D	78	106.549	19.985	6.632	1.00	52.90	D
ATOM	3623	O	ASN	D	78	107.300	20.536	5.826	1.00	53.98	D
ATOM	3624	N	SER	D	79	106.275	20.479	7.835	1.00	51.25	D.
ATOM	3625	CA	SER	D	79	106.856	21.715	8.341	1.00	49.59	D
ATOM	3626	CB	SER	D	79	108.333	21.498	8.664	1.00	49.69	D
ATOM	3627	OG	SER	D	79	108.472	20.604	9.753	1.00	52.23	D
ATOM	3628	C	SER	D	79	106.711	22.931	7.437	1.00	47.21	D
ATOM	3629	O	SER	D	79	107.699	23.588	7.111	1.00	47.49	D
ATOM	3630	N	THR	D	80	105.483	23.235	7.032	1.00	44.68	D
ATOM	3631	CA	THR	D	80	105.245	24.401	6.189	1.00	43.69	D
ATOM	3632	CB	THR	D	80	103.928	24.274	5.407	1.00	45.12	D
ATOM	3633	OG1	THR	D	80	103.976	23.112	4.570	1.00	47.94	D
ATOM	3634	CG2	THR	D	80	103.706	25.505	4.541	1.00	44.11	D
ATOM	3635	C	THR	D	80	105.166	25.634	7.094	1.00	42.94	D
ATOM	3636	O	THR	D	80	104.225	25.783	7.874	1.00	41.60	D
ATOM	3637	N	ALA	D	81	106.162	26.510	6.988	1.00	40.39	D
ATOM	3638	CA	ALA	D	81	106.215	27.715	7.804	1.00	37.86	D
ATOM	3639	CB	ALA	D	81	107.657	28.171	7.958	1.00	39.23	D
ATOM	3640	C	ALA	D	81	105.372	28.846	7.234	1.00	36.29	D
ATOM	3641	O	ALA	D	81	104.988	28.829	6.065	1.00	35.21	D
ATOM	3642	N	ALA	D	82	105.087	29.829	8.079	1.00	34.40	D
ATOM	3643	CA	ALA	D	82	104.294	30.984	7.685	1.00	32.51	D
ATOM	3644	CB	ALA	D	82	103.915	31.789	8.920	1.00	32.45	D
ATOM	3645	C	ALA	D	82	105.064	31.866	6.707	1.00	32.78	D
ATOM	3646	O	ALA	D	82	106.294	31.913	6.740	1.00	30.87	D
ATOM	3647	N	THR	D	83	104.333	32.561	5.839	1.00	32.79	D
ATOM	3648	CA	THR	D	83	104.940	33.459	4.867	1.00	34.48	D
ATOM	3649	CB	THR	D	83	104.195	33.429	3.521	1.00	35.64	D
ATOM	3650	OG1	THR	D	83	104.179	32.094	3.006	1.00	38.88	D
ATOM	3651	CG2	THR	D	83	104.880	34.342	2.521	1.00	35.33	D
ATOM	3652	C	THR	D	83	104.886	34.887	5.401	1.00	35.30	D
ATOM	3653	O	THR	D	83	103.827	35.355	5.824	1.00	36.88	D
ATOM	3654	N	ASN	D	84	106.025	35.575	5.379	1.00	35.07	D
ATOM	3655	CA	ASN	D	84	106.095	36.949	5.855	1.00	33.90	D
ATOM	3656	CB	ASN	D	84	107.548	37.413	6.010	1.00	34.23	D
ATOM	3657	CG	ASN	D	84	108.351	36.545	6.954	1.00	36.16	D
ATOM	3658	OD1	ASN	D	84	107.895	36.195	8.043	1.00	34.99	D
ATOM	3659	ND2	ASN	D	84	109.572	36.205	6.545	1.00	37.40	D
ATOM	3660	C	ASN	D	84	105.419	37.879	4.865	1.00	34.74	D
ATOM	3661	O	ASN	D	84	105.814	37.940	3.699	1.00	35.59	D
ATOM	3662	N	GLU	D	85	104.401	38.599	5.327	1.00	34.09	D
ATOM	3663	CA	GLU	D	85	103.695	39.561	4.489	1.00	32.99	D
ATOM	3664	CB	GLU	D	85	102.239	39.714	4.939	1.00	35.56	D
ATOM	3665	CG	GLU	D	85	101.370	38.475	4.746	1.00	40.80	D
ATOM	3666	CD	GLU	D	85	101.019	38.215	3.291	1.00	43.32	D
ATOM	3667	OE1	GLU	D	85	100.409	39.104	2.658	1.00	46.21	D
ATOM	3668	OE2	GLU	D	85	101.345	37.119	2.782	1.00	44.58	D
ATOM	3669	C	GLU	D	85	104.418	40.886	4.681	1.00	31.21	D
ATOM	3670	O	GLU	D	85	105.220	41.024	5.602	1.00	32.36	D
ATOM	3671	N	VAL	D	86	104.140	41.848	3.808	1.00	29.71	D
ATOM	3672	CA	VAL	D	86	104.749	43.170	3.882	1.00	27.94	D
ATOM	3673	CB	VAL	D	86	105.079	43.712	2.467	1.00	26.90	D
ATOM	3674	CG1	VAL	D	86	105.569	45.166	2.543	1.00	23.11	D
ATOM	3675	CG2	VAL	D	86	106.134	42.829	1.821	1.00	24.31	D
ATOM	3676	C	VAL	D	86	103.767	44.114	4.574	1.00	29.81	D
ATOM	3677	O	VAL	D	86	102.658	44.343	4.088	1.00	30.28	D
ATOM	3678	N	PRO	D	87	104.162	44.666	5.729	1.00	29.08	D
ATOM	3679	CD	PRO	D	87	105.356	44.310	6.509	1.00	29.37	D
ATOM	3680	CA	PRO	D	87	103.306	45.583	6.485	1.00	30.85	D
ATOM	3681	CB	PRO	D	87	104.083	45.791	7.786	1.00	30.80	D
ATOM	3682	CG	PRO	D	87	104.878	44.551	7.920	1.00	30.83	D
ATOM	3683	C	PRO	D	87	103.049	46.907	5.772	1.00	31.43	D
ATOM	3684	O	PRO	D	87	103.863	47.357	4.968	1.00	31.78	D
ATOM	3685	N	GLU	D	88	101.907	47.517	6.081	1.00	31.85	D
ATOM	3686	CA	GLU	D	88	101.516	48.808	5.521	1.00	32.77	D
ATOM	3687	CB	GLU	D	88	100.195	48.687	4.744	1.00	35.18	D
ATOM	3688	CG	GLU	D	88	99.814	49.960	3.987	1.00	43.00	D
ATOM	3689	CD	GLU	D	88	98.512	49.839	3.205	1.00	46.30	D
ATOM	3690	OE1	GLU	D	88	97.439	49.745	3.837	1.00	47.40	D
ATOM	3691	OE2	GLU	D	88	98.564	49.840	1.954	1.00	48.25	D
ATOM	3692	C	GLU	D	88	101.338	49.748	6.721	1.00	31.26	D
ATOM	3693	O	GLU	D	88	100.556	49.457	7.630	1.00	31.21	D
ATOM	3694	N	VAL	D	89	102.060	50.864	6.728	1.00	28.43	D
ATOM	3695	CA	VAL	D	89	101.988	51.806	7.842	1.00	26.87	D

ATOM	3696	CB	VAL	D	89	103.385	52.024	8.454	1.00	26.58	D
ATOM	3697	CG1	VAL	D	89	103.277	52.886	9.699	1.00	26.80	D
ATOM	3698	CG2	VAL	D	89	104.021	50.679	8.787	1.00	24.58	D
ATOM	3699	C	VAL	D	89	101.389	53.174	7.505	1.00	27.02	D
ATOM	3700	O	VAL	D	89	101.698	53.772	6.473	1.00	26.22	D
ATOM	3701	N	THR	D	90	100.530	53.662	8.394	1.00	26.33	D
ATOM	3702	CA	THR	D	90	99.881	54.955	8.219	1.00	26.05	D
ATOM	3703	CB	THR	D	90	98.414	54.802	7.769	1.00	27.24	D
ATOM	3704	OG1	THR	D	90	98.359	54.063	6.543	1.00	31.41	D
ATOM	3705	CG2	THR	D	90	97.786	56.163	7.545	1.00	28.57	D
ATOM	3706	C	THR	D	90	99.883	55.698	9.546	1.00	24.83	D
ATOM	3707	O	THR	D	90	99.542	55.120	10.581	1.00	25.45	D
ATOM	3708	N	VAL	D	91	100.266	56.972	9.512	1.00	22.04	D
ATOM	3709	CA	VAL	D	91	100.300	57.791	10.716	1.00	21.50	D
ATOM	3710	CB	VAL	D	91	101.749	58.280	11.031	1.00	23.04	D
ATOM	3711	CG1	VAL	D	91	101.737	59.245	12.225	1.00	22.74	D
ATOM	3712	CG2	VAL	D	91	102.650	57.082	11.340	1.00	20.38	D
ATOM	3713	C	VAL	D	91	99.369	58.993	10.553	1.00	21.65	D
ATOM	3714	O	VAL	D	91	99.357	59.653	9.509	1.00	21.70	D
ATOM	3715	N	PHE	D	92	98.573	59.252	11.586	1.00	21.34	D
ATOM	3716	CA	PHE	D	92	97.633	60.363	11.580	1.00	21.48	D
ATOM	3717	CB	PHE	D	92	96.370	59.985	10.788	1.00	21.60	D
ATOM	3718	CG	PHE	D	92	95.652	58.771	11.314	1.00	22.22	D
ATOM	3719	CD1	PHE	D	92	94.601	58.902	12.215	1.00	24.10	D
ATOM	3720	CD2	PHE	D	92	96.038	57.495	10.925	1.00	24.53	D
ATOM	3721	CE1	PHE	D	92	93.940	57.774	12.724	1.00	22.72	D
ATOM	3722	CE2	PHE	D	92	95.386	56.355	11.428	1.00	23.87	D
ATOM	3723	CZ	PHE	D	92	94.335	56.501	12.329	1.00	21.18	D
ATOM	3724	C	PHE	D	92	97.303	60.700	13.030	1.00	22.72	D
ATOM	3725	O	PHE	D	92	97.607	59.921	13.933	1.00	22.31	D
ATOM	3726	N	SER	D	93	96.696	61.859	13.261	1.00	22.45	D
ATOM	3727	CA	SER	D	93	96.366	62.262	14.623	1.00	21.69	D
ATOM	3728	CB	SER	D	93	96.599	63.764	14.799	1.00	20.96	D
ATOM	3729	OG	SER	D	93	95.696	64.508	14.010	1.00	25.08	D
ATOM	3730	C	SER	D	93	94.931	61.913	14.990	1.00	21.02	D
ATOM	3731	O	SER	D	93	94.078	61.755	14.127	1.00	20.62	D
ATOM	3732	N	LYS	D	94	94.676	61.791	16.283	1.00	20.66	D
ATOM	3733	CA	LYS	D	94	93.350	61.453	16.768	1.00	24.11	D
ATOM	3734	CB	LYS	D	94	93.444	60.985	18.223	1.00	24.91	D
ATOM	3735	CG	LYS	D	94	92.121	60.605	18.865	1.00	29.49	D
ATOM	3736	CD	LYS	D	94	92.353	60.101	20.293	1.00	32.97	D
ATOM	3737	CE	LYS	D	94	91.050	59.909	21.052	1.00	33.37	D
ATOM	3738	NZ	LYS	D	94	90.175	58.897	20.399	1.00	34.08	D
ATOM	3739	C	LYS	D	94	92.406	62.646	16.654	1.00	24.40	D
ATOM	3740	O	LYS	D	94	91.224	62.495	16.356	1.00	24.55	D
ATOM	3741	N	SER	D	95	92.935	63.834	16.894	1.00	25.54	D
ATOM	3742	CA	SER	D	95	92.133	65.040	16.815	1.00	29.22	D
ATOM	3743	CB	SER	D	95	91.932	65.643	18.208	1.00	30.47	D
ATOM	3744	OG	SER	D	95	91.236	64.746	19.060	1.00	36.11	D
ATOM	3745	C	SER	D	95	92.843	66.046	15.932	1.00	29.71	D
ATOM	3746	O	SER	D	95	93.993	65.834	15.531	1.00	29.68	D
ATOM	3747	N	PRO	D	96	92.159	67.146	15.588	1.00	29.93	D
ATOM	3748	CD	PRO	D	96	90.760	67.532	15.843	1.00	31.14	D
ATOM	3749	CA	PRO	D	96	92.836	68.129	14.747	1.00	29.29	D
ATOM	3750	CB	PRO	D	96	91.714	69.097	14.369	1.00	31.65	D
ATOM	3751	CG	PRO	D	96	90.777	69.010	15.545	1.00	30.66	D
ATOM	3752	C	PRO	D	96	93.939	68.765	15.587	1.00	27.35	D
ATOM	3753	O	PRO	D	96	93.818	68.904	16.806	1.00	24.86	D
ATOM	3754	N	VAL	D	97	95.025	69.127	14.929	1.00	26.81	D
ATOM	3755	CA	VAL	D	97	96.158	69.706	15.615	1.00	29.25	D
ATOM	3756	CB	VAL	D	97	97.438	69.501	14.783	1.00	31.49	D
ATOM	3757	CG1	VAL	D	97	98.652	69.998	15.556	1.00	33.50	D
ATOM	3758	CG2	VAL	D	97	97.583	68.029	14.415	1.00	34.03	D
ATOM	3759	C	VAL	D	97	96.007	71.196	15.910	1.00	28.80	D
ATOM	3760	O	VAL	D	97	95.749	71.998	15.012	1.00	28.78	D
ATOM	3761	N	THR	D	98	96.144	71.559	17.178	1.00	27.47	D
ATOM	3762	CA	THR	D	98	96.091	72.960	17.572	1.00	26.55	D
ATOM	3763	CB	THR	D	98	94.723	73.365	18.209	1.00	26.16	D
ATOM	3764	OG1	THR	D	98	94.684	72.961	19.575	1.00	31.83	D
ATOM	3765	CG2	THR	D	98	93.567	72.717	17.469	1.00	23.66	D
ATOM	3766	C	THR	D	98	97.220	73.114	18.581	1.00	25.73	D
ATOM	3767	O	THR	D	98	97.260	72.412	19.591	1.00	27.12	D
ATOM	3768	N	LEU	D	99	98.159	74.005	18.285	1.00	26.12	D
ATOM	3769	CA	LEU	D	99	99.307	74.236	19.156	1.00	27.47	D

ATOM	3770	CB	LEU	D	99	100.089	75.459	18.675	1.00	31.04	D
ATOM	3771	CG	LEU	D	99	100.758	75.309	17.310	1.00	33.09	D
ATOM	3772	CD1	LEU	D	99	101.458	76.607	16.940	1.00	36.20	D
ATOM	3773	CD2	LEU	D	99	101.754	74.165	17.361	1.00	35.56	D
ATOM	3774	C	LEU	D	99	98.935	74.416	20.621	1.00	26.08	D
ATOM	3775	O	LEU	D	99	98.077	75.222	20.946	1.00	25.97	D
ATOM	3776	N	GLY	D	100	99.585	73.654	21.500	1.00	26.97	D
ATOM	3777	CA	GLY	D	100	99.310	73.749	22.924	1.00	26.03	D
ATOM	3778	C	GLY	D	100	98.233	72.798	23.422	1.00	26.02	D
ATOM	3779	O	GLY	D	100	98.020	72.662	24.629	1.00	25.51	D
ATOM	3780	N	GLN	D	101	97.553	72.143	22.491	1.00	25.73	D
ATOM	3781	CA	GLN	D	101	96.490	71.199	22.820	1.00	28.13	D
ATOM	3782	CB	GLN	D	101	95.372	71.297	21.776	1.00	32.24	D
ATOM	3783	CG	GLN	D	101	94.617	69.981	21.560	1.00	38.65	D
ATOM	3784	CD	GLN	D	101	94.680	69.459	20.115	1.00	41.08	D
ATOM	3785	OE1	GLN	D	101	95.760	69.348	19.511	1.00	38.18	D
ATOM	3786	NE2	GLN	D	101	93.515	69.119	19.566	1.00	40.87	D
ATOM	3787	C	GLN	D	101	96.994	69.756	22.861	1.00	25.22	D
ATOM	3788	O	GLN	D	101	97.477	69.245	21.857	1.00	24.55	D
ATOM	3789	N	PRO	D	102	96.885	69.078	24.019	1.00	24.18	D
ATOM	3790	CD	PRO	D	102	96.436	69.544	25.343	1.00	22.22	D
ATOM	3791	CA	PRO	D	102	97.359	67.683	24.080	1.00	22.76	D
ATOM	3792	CB	PRO	D	102	96.983	67.253	25.494	1.00	22.02	D
ATOM	3793	CG	PRO	D	102	97.088	68.542	26.274	1.00	22.44	D
ATOM	3794	C	PRO	D	102	96.649	66.845	23.015	1.00	21.72	D
ATOM	3795	O	PRO	D	102	95.429	66.922	22.876	1.00	22.65	D
ATOM	3796	N	ASN	D	103	97.409	66.055	22.264	1.00	19.84	D
ATOM	3797	CA	ASN	D	103	96.833	65.225	21.209	1.00	17.89	D
ATOM	3798	CB	ASN	D	103	97.112	65.856	19.838	1.00	16.30	D
ATOM	3799	CG	ASN	D	103	96.005	65.587	18.824	1.00	16.50	D
ATOM	3800	OD1	ASN	D	103	95.552	64.446	18.636	1.00	16.80	D
ATOM	3801	ND2	ASN	D	103	95.569	66.643	18.160	1.00	14.61	D
ATOM	3802	C	ASN	D	103	97.410	63.805	21.248	1.00	17.24	D
ATOM	3803	O	ASN	D	103	98.199	63.473	22.129	1.00	15.74	D
ATOM	3804	N	ILE	D	104	97.010	62.977	20.284	1.00	17.39	D
ATOM	3805	CA	ILE	D	104	97.465	61.595	20.198	1.00	15.30	D
ATOM	3806	CB	ILE	D	104	96.402	60.627	20.755	1.00	17.89	D
ATOM	3807	CG2	ILE	D	104	96.818	59.175	20.498	1.00	13.27	D
ATOM	3808	CG1	ILE	D	104	96.202	60.886	22.253	1.00	18.46	D
ATOM	3809	CD1	ILE	D	104	95.179	59.965	22.895	1.00	17.98	D
ATOM	3810	C	ILE	D	104	97.760	61.185	18.763	1.00	17.15	D
ATOM	3811	O	ILE	D	104	96.887	61.283	17.902	1.00	18.07	D
ATOM	3812	N	LEU	D	105	98.987	60.727	18.509	1.00	16.66	D
ATOM	3813	CA	LEU	D	105	99.370	60.272	17.177	1.00	16.59	D
ATOM	3814	CB	LEU	D	105	100.864	60.482	16.895	1.00	17.56	D
ATOM	3815	CG	LEU	D	105	101.375	61.926	16.842	1.00	21.66	D
ATOM	3816	CD1	LEU	D	105	102.811	61.943	16.302	1.00	21.26	D
ATOM	3817	CD2	LEU	D	105	100.460	62.771	15.951	1.00	21.56	D
ATOM	3818	C	LEU	D	105	99.061	58.804	17.128	1.00	17.13	D
ATOM	3819	O	LEU	D	105	99.368	58.056	18.056	1.00	18.35	D
ATOM	3820	N	ILE	D	106	98.432	58.399	16.039	1.00	17.88	D
ATOM	3821	CA	ILE	D	106	98.045	57.016	15.839	1.00	17.14	D
ATOM	3822	CB	ILE	D	106	96.525	56.939	15.492	1.00	16.99	D
ATOM	3823	CG2	ILE	D	106	96.093	55.496	15.318	1.00	15.63	D
ATOM	3824	CG1	ILE	D	106	95.711	57.619	16.604	1.00	19.04	D
ATOM	3825	CD1	ILE	D	106	94.238	57.877	16.260	1.00	16.48	D
ATOM	3826	C	ILE	D	106	98.876	56.431	14.700	1.00	17.19	D
ATOM	3827	O	ILE	D	106	98.941	57.004	13.618	1.00	16.06	D
ATOM	3828	N	CYS	D	107	99.540	55.312	14.966	1.00	18.84	D
ATOM	3829	CA	CYS	D	107	100.339	54.637	13.954	1.00	19.74	D
ATOM	3830	C	CYS	D	107	99.634	53.323	13.670	1.00	20.17	D
ATOM	3831	O	CYS	D	107	99.632	52.421	14.507	1.00	20.08	D
ATOM	3832	CB	CYS	D	107	101.755	54.349	14.453	1.00	22.00	D
ATOM	3833	SG	CYS	D	107	102.800	53.514	13.211	1.00	28.61	D
ATOM	3834	N	LEU	D	108	99.027	53.221	12.493	1.00	19.48	D
ATOM	3835	CA	LEU	D	108	98.313	52.015	12.113	1.00	19.67	D
ATOM	3836	CB	LEU	D	108	97.024	52.391	11.369	1.00	19.98	D
ATOM	3837	CG	LEU	D	108	95.977	51.358	10.925	1.00	20.40	D
ATOM	3838	CD1	LEU	D	108	95.883	51.366	9.412	1.00	20.15	D
ATOM	3839	CD2	LEU	D	108	96.301	49.971	11.454	1.00	19.44	D
ATOM	3840	C	LEU	D	108	99.207	51.145	11.237	1.00	19.84	D
ATOM	3841	O	LEU	D	108	99.657	51.563	10.170	1.00	20.11	D
ATOM	3842	N	VAL	D	109	99.473	49.940	11.721	1.00	19.32	D
ATOM	3843	CA	VAL	D	109	100.289	48.972	11.016	1.00	19.64	D

ATOM	3844	CB	VAL	D	109	101.368	48.402	11.958	1.00	19.40	D
ATOM	3845	CG1	VAL	D	109	102.290	47.474	11.202	1.00	18.01	D
ATOM	3846	CG2	VAL	D	109	102.155	49.560	12.590	1.00	17.30	D
ATOM	3847	C	VAL	D	109	99.321	47.876	10.568	1.00	21.45	D
ATOM	3848	O	VAL	D	109	98.845	47.079	11.382	1.00	22.65	D
ATOM	3849	N	ASP	D	110	99.022	47.861	9.274	1.00	22.00	D
ATOM	3850	CA	ASP	D	110	98.086	46.901	8.689	1.00	23.80	D
ATOM	3851	CB	ASP	D	110	97.156	47.648	7.728	1.00	24.68	D
ATOM	3852	CG	ASP	D	110	95.790	47.002	7.603	1.00	26.64	D
ATOM	3853	OD1	ASP	D	110	95.582	45.915	8.177	1.00	28.80	D
ATOM	3854	OD2	ASP	D	110	94.920	47.591	6.926	1.00	27.99	D
ATOM	3855	C	ASP	D	110	98.802	45.756	7.944	1.00	23.77	D
ATOM	3856	O	ASP	D	110	100.005	45.831	7.684	1.00	22.82	D
ATOM	3857	N	ASN	D	111	98.044	44.711	7.604	1.00	23.55	D
ATOM	3858	CA	ASN	D	111	98.548	43.530	6.889	1.00	23.79	D
ATOM	3859	CB	ASN	D	111	98.880	43.867	5.425	1.00	25.36	D
ATOM	3860	CG	ASN	D	111	99.079	42.610	4.562	1.00	29.95	D
ATOM	3861	OD1	ASN	D	111	99.981	42.547	3.724	1.00	29.58	D
ATOM	3862	ND2	ASN	D	111	98.220	41.611	4.761	1.00	30.51	D
ATOM	3863	C	ASN	D	111	99.786	42.941	7.556	1.00	22.70	D
ATOM	3864	O	ASN	D	111	100.834	42.784	6.929	1.00	22.97	D
ATOM	3865	N	ILE	D	112	99.656	42.612	8.835	1.00	22.14	D
ATOM	3866	CA	ILE	D	112	100.754	42.038	9.598	1.00	20.20	D
ATOM	3867	CB	ILE	D	112	100.746	42.536	11.055	1.00	18.82	D
ATOM	3868	CG2	ILE	D	112	101.926	41.950	11.808	1.00	15.77	D
ATOM	3869	CG1	ILE	D	112	100.770	44.058	11.103	1.00	19.09	D
ATOM	3870	CD1	ILE	D	112	100.630	44.602	12.514	1.00	21.18	D
ATOM	3871	C	ILE	D	112	100.666	40.512	9.659	1.00	21.41	D
ATOM	3872	O	ILE	D	112	99.626	39.960	10.002	1.00	22.04	D
ATOM	3873	N	PHE	D	113	101.765	39.838	9.338	1.00	21.35	D
ATOM	3874	CA	PHE	D	113	101.818	38.386	9.409	1.00	19.93	D
ATOM	3875	CB	PHE	D	113	100.822	37.726	8.462	1.00	21.28	D
ATOM	3876	CG	PHE	D	113	100.537	36.306	8.825	1.00	20.91	D
ATOM	3877	CD1	PHE	D	113	99.630	36.012	9.838	1.00	19.85	D
ATOM	3878	CD2	PHE	D	113	101.244	35.261	8.230	1.00	22.61	D
ATOM	3879	CE1	PHE	D	113	99.430	34.698	10.264	1.00	20.63	D
ATOM	3880	CE2	PHE	D	113	101.054	33.942	8.646	1.00	21.21	D
ATOM	3881	CZ	PHE	D	113	100.144	33.660	9.669	1.00	20.87	D
ATOM	3882	C	PHE	D	113	103.201	37.871	9.071	1.00	19.98	D
ATOM	3883	O	PHE	D	113	103.762	38.238	8.044	1.00	20.80	D
ATOM	3884	N	PRO	D	114	103.765	37.005	9.925	1.00	21.26	D
ATOM	3885	CD	PRO	D	114	105.101	36.414	9.732	1.00	21.94	D
ATOM	3886	CA	PRO	D	114	103.150	36.518	11.166	1.00	21.41	D
ATOM	3887	CB	PRO	D	114	104.117	35.424	11.625	1.00	21.03	D
ATOM	3888	CG	PRO	D	114	105.441	35.912	11.115	1.00	22.98	D
ATOM	3889	C	PRO	D	114	103.002	37.648	12.185	1.00	21.84	D
ATOM	3890	O	PRO	D	114	103.621	38.711	12.034	1.00	20.41	D
ATOM	3891	N	PRO	D	115	102.167	37.441	13.222	1.00	22.52	D
ATOM	3892	CD	PRO	D	115	101.314	36.256	13.445	1.00	22.08	D
ATOM	3893	CA	PRO	D	115	101.937	38.448	14.266	1.00	21.19	D
ATOM	3894	CB	PRO	D	115	100.730	37.895	15.025	1.00	20.92	D
ATOM	3895	CG	PRO	D	115	100.917	36.410	14.902	1.00	19.88	D
ATOM	3896	C	PRO	D	115	103.139	38.683	15.171	1.00	21.62	D
ATOM	3897	O	PRO	D	115	103.127	38.336	16.356	1.00	22.92	D
ATOM	3898	N	VAL	D	116	104.179	39.263	14.588	1.00	21.58	D
ATOM	3899	CA	VAL	D	116	105.405	39.598	15.300	1.00	22.53	D
ATOM	3900	CB	VAL	D	116	106.520	38.554	15.067	1.00	24.90	D
ATOM	3901	CG1	VAL	D	116	107.817	39.035	15.713	1.00	24.06	D
ATOM	3902	CG2	VAL	D	116	106.104	37.195	15.641	1.00	24.88	D
ATOM	3903	C	VAL	D	116	105.855	40.929	14.708	1.00	21.86	D
ATOM	3904	O	VAL	D	116	106.114	41.027	13.509	1.00	20.87	D
ATOM	3905	N	VAL	D	117	105.935	41.962	15.534	1.00	20.65	D
ATOM	3906	CA	VAL	D	117	106.338	43.255	15.007	1.00	21.60	D
ATOM	3907	CB	VAL	D	117	105.126	43.978	14.345	1.00	18.11	D
ATOM	3908	CG1	VAL	D	117	104.156	44.473	15.403	1.00	16.63	D
ATOM	3909	CG2	VAL	D	117	105.599	45.101	13.469	1.00	17.02	D
ATOM	3910	C	VAL	D	117	106.928	44.137	16.092	1.00	23.84	D
ATOM	3911	O	VAL	D	117	106.677	43.936	17.280	1.00	24.78	D
ATOM	3912	N	ASN	D	118	107.719	45.113	15.670	1.00	27.93	D
ATOM	3913	CA	ASN	D	118	108.348	46.051	16.593	1.00	30.45	D
ATOM	3914	CB	ASN	D	118	109.866	45.898	16.538	1.00	33.93	D
ATOM	3915	CG	ASN	D	118	110.564	46.644	17.650	1.00	39.88	D
ATOM	3916	OD1	ASN	D	118	110.327	47.834	17.856	1.00	42.45	D
ATOM	3917	ND2	ASN	D	118	111.438	45.946	18.375	1.00	43.14	D

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ATOM	3918	C	ASN D 118	107.960	47.465	16.181	1.00	27.72	D
ATOM	3919	O	ASN D 118	108.398	47.952	15.140	1.00	26.88	D
ATOM	3920	N	ILE D 119	107.126	48.113	16.988	1.00	27.59	D
ATOM	3921	CA	ILE D 119	106.680	49.476	16.700	1.00	27.12	D
ATOM	3922	CB	ILE D 119	105.133	49.580	16.719	1.00	27.17	D
ATOM	3923	CG2	ILE D 119	104.698	50.994	16.346	1.00	26.16	D
ATOM	3924	CG1	ILE D 119	104.528	48.572	15.741	1.00	24.63	D
ATOM	3925	CD1	ILE D 119	103.026	48.423	15.877	1.00	24.19	D
ATOM	3926	C	ILE D 119	107.243	50.436	17.746	1.00	27.72	D
ATOM	3927	O	ILE D 119	107.050	50.248	18.946	1.00	26.86	D
ATOM	3928	N	THR D 120	107.951	51.460	17.291	1.00	27.54	D
ATOM	3929	CA	THR D 120	108.524	52.423	18.214	1.00	29.37	D
ATOM	3930	CB	THR D 120	110.022	52.131	18.477	1.00	32.22	D
ATOM	3931	OG1	THR D 120	110.722	52.034	17.229	1.00	35.14	D
ATOM	3932	CG2	THR D 120	110.176	50.817	19.247	1.00	35.67	D
ATOM	3933	C	THR D 120	108.369	53.826	17.668	1.00	27.95	D
ATOM	3934	O	THR D 120	108.398	54.035	16.459	1.00	29.89	D
ATOM	3935	N	TRP D 121	108.187	54.789	18.560	1.00	26.28	D
ATOM	3936	CA	TRP D 121	108.031	56.171	18.135	1.00	26.93	D
ATOM	3937	CB	TRP D 121	106.935	56.866	18.940	1.00	24.20	D
ATOM	3938	CG	TRP D 121	105.568	56.343	18.687	1.00	22.03	D
ATOM	3939	CD2	TRP D 121	104.643	56.826	17.707	1.00	20.30	D
ATOM	3940	CE2	TRP D 121	103.454	56.085	17.856	1.00	20.70	D
ATOM	3941	CE3	TRP D 121	104.705	57.817	16.717	1.00	17.15	D
ATOM	3942	CD1	TRP D 121	104.929	55.351	19.365	1.00	21.06	D
ATOM	3943	NE1	TRP D 121	103.655	55.190	18.875	1.00	22.39	D
ATOM	3944	CZ2	TRP D 121	102.332	56.305	17.057	1.00	17.25	D
ATOM	3945	CZ3	TRP D 121	103.593	58.036	15.924	1.00	17.92	D
ATOM	3946	CH2	TRP D 121	102.419	57.282	16.099	1.00	19.11	D
ATOM	3947	C	TRP D 121	109.319	56.957	18.284	1.00	26.88	D
ATOM	3948	O	TRP D 121	110.059	56.789	19.251	1.00	27.48	D
ATOM	3949	N	LEU D 122	109.572	57.830	17.321	1.00	29.82	D
ATOM	3950	CA	LEU D 122	110.764	58.658	17.343	1.00	31.91	D
ATOM	3951	CB	LEU D 122	111.664	58.331	16.144	1.00	34.65	D
ATOM	3952	CG	LEU D 122	112.391	56.977	16.112	1.00	37.28	D
ATOM	3953	CD1	LEU D 122	113.247	56.828	17.360	1.00	37.11	D
ATOM	3954	CD2	LEU D 122	111.394	55.840	16.025	1.00	39.41	D
ATOM	3955	C	LEU D 122	110.416	60.142	17.324	1.00	31.97	D
ATOM	3956	O	LEU D 122	109.619	60.593	16.503	1.00	31.46	D
ATOM	3957	N	SER D 123	111.010	60.889	18.250	1.00	31.03	D
ATOM	3958	CA	SER D 123	110.813	62.331	18.326	1.00	33.04	D
ATOM	3959	CB	SER D 123	110.312	62.745	19.712	1.00	32.42	D
ATOM	3960	OG	SER D 123	110.169	64.154	19.793	1.00	32.43	D
ATOM	3961	C	SER D 123	112.184	62.948	18.062	1.00	33.10	D
ATOM	3962	O	SER D 123	113.108	62.784	18.860	1.00	33.57	D
ATOM	3963	N	ASN D 124	112.309	63.646	16.941	1.00	33.51	D
ATOM	3964	CA	ASN D 124	113.575	64.258	16.553	1.00	36.20	D
ATOM	3965	CB	ASN D 124	113.963	65.392	17.510	1.00	34.61	D
ATOM	3966	CG	ASN D 124	112.946	66.512	17.531	1.00	34.17	D
ATOM	3967	OD1	ASN D 124	112.262	66.764	16.539	1.00	34.73	D
ATOM	3968	ND2	ASN D 124	112.850	67.202	18.660	1.00	35.34	D
ATOM	3969	C	ASN D 124	114.664	63.191	16.561	1.00	37.34	D
ATOM	3970	O	ASN D 124	115.747	63.401	17.104	1.00	37.93	D
ATOM	3971	N	GLY D 125	114.358	62.039	15.970	1.00	38.73	D
ATOM	3972	CA	GLY D 125	115.317	60.951	15.910	1.00	39.56	D
ATOM	3973	C	GLY D 125	115.457	60.131	17.183	1.00	40.55	D
ATOM	3974	O	GLY D 125	116.051	59.054	17.157	1.00	42.52	D
ATOM	3975	N	HIS D 126	114.911	60.622	18.291	1.00	40.35	D
ATOM	3976	CA	HIS D 126	115.009	59.918	19.569	1.00	41.15	D
ATOM	3977	CB	HIS D 126	115.234	60.923	20.702	1.00	43.51	D
ATOM	3978	CG	HIS D 126	116.525	61.678	20.599	1.00	47.67	D
ATOM	3979	CD2	HIS D 126	116.775	62.997	20.422	1.00	47.36	D
ATOM	3980	ND1	HIS D 126	117.757	61.064	20.694	1.00	49.39	D
ATOM	3981	CE1	HIS D 126	118.709	61.973	20.581	1.00	48.59	D
ATOM	3982	NE2	HIS D 126	118.140	63.154	20.415	1.00	48.17	D
ATOM	3983	C	HIS D 126	113.794	59.053	19.907	1.00	40.38	D
ATOM	3984	O	HIS D 126	112.648	59.458	19.706	1.00	39.87	D
ATOM	3985	N	SER D 127	114.056	57.863	20.438	1.00	39.11	D
ATOM	3986	CA	SER D 127	112.995	56.939	20.821	1.00	39.54	D
ATOM	3987	CB	SER D 127	113.592	55.592	21.232	1.00	40.04	D
ATOM	3988	OG	SER D 127	114.299	55.001	20.159	1.00	45.08	D
ATOM	3989	C	SER D 127	112.167	57.492	21.979	1.00	38.18	D
ATOM	3990	O	SER D 127	112.707	58.054	22.930	1.00	38.52	D
ATOM	3991	N	VAL D 128	110.854	57.326	21.894	1.00	36.40	D

ATOM	3992	CA	VAL D 128	109.967	57.800	22.942	1.00	35.00	D
ATOM	3993	CB	VAL D 128	108.699	58.444	22.358	1.00	33.68	D
ATOM	3994	CG1	VAL D 128	107.834	59.001	23.479	1.00	32.31	D
ATOM	3995	CG2	VAL D 128	109.081	59.543	21.383	1.00	32.69	D
ATOM	3996	C	VAL D 128	109.574	56.608	23.790	1.00	34.62	D
ATOM	3997	O	VAL D 128	109.150	55.584	23.268	1.00	35.98	D
ATOM	3998	N	THR D 129	109.715	56.743	25.100	1.00	35.57	D
ATOM	3999	CA	THR D 129	109.393	55.653	26.007	1.00	38.21	D
ATOM	4000	CB	THR D 129	110.562	55.410	26.992	1.00	40.63	D
ATOM	4001	OG1	THR D 129	110.184	54.413	27.949	1.00	44.78	D
ATOM	4002	CG2	THR D 129	110.929	56.700	27.715	1.00	42.66	D
ATOM	4003	C	THR D 129	108.103	55.862	26.799	1.00	36.54	D
ATOM	4004	O	THR D 129	107.359	54.911	27.042	1.00	38.87	D
ATOM	4005	N	GLU D 130	107.833	57.101	27.195	1.00	33.00	D
ATOM	4006	CA	GLU D 130	106.631	57.401	27.963	1.00	31.03	D
ATOM	4007	CB	GLU D 130	106.935	58.453	29.039	1.00	33.90	D
ATOM	4008	CG	GLU D 130	108.067	58.089	29.987	1.00	38.08	D
ATOM	4009	CD	GLU D 130	107.809	56.788	30.731	1.00	43.43	D
ATOM	4010	OE1	GLU D 130	106.744	56.672	31.375	1.00	45.61	D
ATOM	4011	OE2	GLU D 130	108.671	55.879	30.675	1.00	45.67	D
ATOM	4012	C	GLU D 130	105.521	57.922	27.058	1.00	27.87	D
ATOM	4013	O	GLU D 130	105.795	58.527	26.029	1.00	24.56	D
ATOM	4014	N	GLY D 131	104.272	57.692	27.457	1.00	26.29	D
ATOM	4015	CA	GLY D 131	103.140	58.166	26.679	1.00	25.19	D
ATOM	4016	C	GLY D 131	102.826	57.304	25.474	1.00	24.46	D
ATOM	4017	O	GLY D 131	102.130	57.725	24.559	1.00	23.65	D
ATOM	4018	N	VAL D 132	103.349	56.089	25.476	1.00	22.83	D
ATOM	4019	CA	VAL D 132	103.117	55.169	24.379	1.00	23.04	D
ATOM	4020	CB	VAL D 132	104.448	54.674	23.784	1.00	22.91	D
ATOM	4021	CG1	VAL D 132	104.182	53.538	22.821	1.00	24.12	D
ATOM	4022	CG2	VAL D 132	105.164	55.816	23.076	1.00	22.85	D
ATOM	4023	C	VAL D 132	102.326	53.943	24.829	1.00	21.91	D
ATOM	4024	O	VAL D 132	102.535	53.416	25.917	1.00	21.27	D
ATOM	4025	N	SER D 133	101.412	53.499	23.979	1.00	22.08	D
ATOM	4026	CA	SER D 133	100.622	52.307	24.251	1.00	21.07	D
ATOM	4027	CB	SER D 133	99.405	52.637	25.119	1.00	21.95	D
ATOM	4028	OG	SER D 133	98.567	53.595	24.498	1.00	27.01	D
ATOM	4029	C	SER D 133	100.178	51.738	22.908	1.00	21.27	D
ATOM	4030	O	SER D 133	100.344	52.369	21.864	1.00	19.82	D
ATOM	4031	N	GLU D 134	99.627	50.538	22.926	1.00	20.29	D
ATOM	4032	CA	GLU D 134	99.182	49.938	21.689	1.00	24.12	D
ATOM	4033	CB	GLU D 134	100.370	49.323	20.932	1.00	26.01	D
ATOM	4034	CG	GLU D 134	100.932	48.045	21.532	1.00	30.80	D
ATOM	4035	CD	GLU D 134	102.080	47.480	20.704	1.00	35.43	D
ATOM	4036	OE1	GLU D 134	102.273	46.243	20.702	1.00	36.93	D
ATOM	4037	OE2	GLU D 134	102.793	48.278	20.057	1.00	37.66	D
ATOM	4038	C	GLU D 134	98.127	48.882	21.955	1.00	22.81	D
ATOM	4039	O	GLU D 134	97.968	48.416	23.081	1.00	22.94	D
ATOM	4040	N	THR D 135	97.400	48.522	20.908	1.00	21.95	D
ATOM	4041	CA	THR D 135	96.361	47.519	21.009	1.00	20.78	D
ATOM	4042	CB	THR D 135	95.368	47.625	19.843	1.00	20.82	D
ATOM	4043	OG1	THR D 135	96.032	47.262	18.623	1.00	22.24	D
ATOM	4044	CG2	THR D 135	94.833	49.046	19.721	1.00	18.01	D
ATOM	4045	C	THR D 135	97.037	46.168	20.890	1.00	20.80	D
ATOM	4046	O	THR D 135	98.259	46.084	20.742	1.00	21.08	D
ATOM	4047	N	SER D 136	96.234	45.116	20.972	1.00	19.11	D
ATOM	4048	CA	SER D 136	96.728	43.764	20.790	1.00	16.93	D
ATOM	4049	CB	SER D 136	95.769	42.755	21.428	1.00	19.17	D
ATOM	4050	OG	SER D 136	95.656	42.951	22.831	1.00	23.01	D
ATOM	4051	C	SER D 136	96.665	43.635	19.267	1.00	15.30	D
ATOM	4052	O	SER D 136	96.325	44.592	18.580	1.00	13.19	D
ATOM	4053	N	PHE D 137	97.002	42.472	18.733	1.00	16.43	D
ATOM	4054	CA	PHE D 137	96.896	42.267	17.294	1.00	16.20	D
ATOM	4055	CB	PHE D 137	97.652	41.001	16.874	1.00	15.86	D
ATOM	4056	CG	PHE D 137	99.138	41.146	16.879	1.00	17.29	D
ATOM	4057	CD1	PHE D 137	99.792	41.775	15.823	1.00	20.23	D
ATOM	4058	CD2	PHE D 137	99.894	40.644	17.932	1.00	17.79	D
ATOM	4059	CE1	PHE D 137	101.187	41.900	15.815	1.00	21.20	D
ATOM	4060	CE2	PHE D 137	101.291	40.762	17.936	1.00	19.39	D
ATOM	4061	CZ	PHE D 137	101.935	41.392	16.874	1.00	19.70	D
ATOM	4062	C	PHE D 137	95.402	42.056	17.025	1.00	16.08	D
ATOM	4063	O	PHE D 137	94.823	41.121	17.556	1.00	15.19	D
ATOM	4064	N	LEU D 138	94.786	42.925	16.227	1.00	19.23	D
ATOM	4065	CA	LEU D 138	93.367	42.797	15.882	1.00	21.12	D

ATOM	4066	CB	LEU	D	138	92.722	44.175	15.678	1.00 21.40	D
ATOM	4067	CG	LEU	D	138	92.452	45.087	16.881	1.00 22.42	D
ATOM	4068	CD1	LEU	D	138	91.889	44.277	.18.032	1.00 23.38	D
ATOM	4069	CD2	LEU	D	138	93.732	45.764	17.301	1.00 28.68	D
ATOM	4070	C	LEU	D	138	93.230	41.982	14.593	1.00 20.56	D
ATOM	4071	O	LEU	D	138	93.919	42.244	13.615	1.00 22.27	D
ATOM	4072	N	SER	D	139	92.326	41.013	14.586	1.00 20.44	D
ATOM	4073	CA	SER	D	139	92.143	40.142	13.427	1.00 19.23	D
ATOM	4074	CB	SER	D	139	91.222	38.986	13.788	1.00 19.74	D
ATOM	4075	OG	SER	D	139	89.888	39.443	13.861	1.00 21.32	D
ATOM	4076	C	SER	D	139	91.594	40.802	12.168	1.00 19.43	D
ATOM	4077	O	SER	D	139	91.028	41.893	12.210	1.00 19.49	D
ATOM	4078	N	LYS	D	140	91.755	40.102	11.050	1.00 18.62	D
ATOM	4079	CA	LYS	D	140	91.276	40.553	9.749	1.00 19.20	D
ATOM	4080	CB	LYS	D	140	92.437	41.058	8.895	1.00 18.92	D
ATOM	4081	CG	LYS	D	140	93.286	42.126	9.554	1.00 19.38	D
ATOM	4082	CD	LYS	D	140	93.254	43.393	8.758	1.00 20.95	D
ATOM	4083	CE	LYS	D	140	93.833	43.195	7.377	1.00 18.23	D
ATOM	4084	NZ	LYS	D	140	93.743	44.457	6.617	1.00 20.40	D
ATOM	4085	C	LYS	D	140	90.660	39.339	9.068	1.00 19.16	D
ATOM	4086	O	LYS	D	140	91.091	38.217	9.312	1.00 19.77	D
ATOM	4087	N	SER	D	141	89.670	39.552	8.207	1.00 21.60	D
ATOM	4088	CA	SER	D	141	89.030	38.438	7.507	1.00 23.19	D
ATOM	4089	CB	SER	D	141	87.859	38.948	6.653	1.00 24.88	D
ATOM	4090	OG	SER	D	141	88.288	39.858	5.655	1.00 28.69	D
ATOM	4091	C	SER	D	141	89.989	37.605	6.636	1.00 23.26	D
ATOM	4092	O	SER	D	141	89.692	36.454	6.327	1.00 23.33	D
ATOM	4093	N	ASP	D	142	91.137	38.159	6.251	1.00 21.38	D
ATOM	4094	CA	ASP	D	142	92.075	37.387	5.429	1.00 22.54	D
ATOM	4095	CB	ASP	D	142	92.834	38.303	4.466	1.00 25.84	D
ATOM	4096	CG	ASP	D	142	93.943	39.064	5.143	1.00 29.78	D
ATOM	4097	OD1	ASP	D	142	93.760	39.486	6.309	1.00 31.16	D
ATOM	4098	OD2	ASP	D	142	94.997	39.246	4.500	1.00 34.64	D
ATOM	4099	C	ASP	D	142	93.045	36.637	6.336	1.00 22.89	D
ATOM	4100	O	ASP	D	142	94.027	36.037	5.883	1.00 20.54	D
ATOM	4101	N	HIS	D	143	92.753	36.700	7.632	1.00 21.06	D
ATOM.	4102	CA	HIS	D	143	93.522	36.020	8.659	1.00 19.58	D
ATOM	4103	CB	HIS	D	143	93.628	34.534	8.317	1.00 19.03	D
ATOM	4104	CG	HIS	D	143	92.295	33.892	8.104	1.00 23.00	D
ATOM	4105	CD2	HIS	D	143	91.827	33.108	7.104	1.00 24.78	D
ATOM	4106	ND1	HIS	D	143	91.237	34.087	8.967	1.00 21.97	D
ATOM	4107	CE1	HIS	D	143	90.174	33.455	8.505	1.00 24.67	D
ATOM	4108	NE2	HIS	D	143	90.504	32.853	7.375	1.00 24.72	D
ATOM	4109	C	HIS	D	143	94.878	36.602	8.986	1.00 20.11	D
ATOM	4110	O	HIS	D	143	95.691	35.962	9.654	1.00 21.09	D
ATOM	4111	N	SER	D	144	95.118	37.820	8.514	1.00 21.24	D
ATOM	4112	CA	SER	D	144	96.352	38.525	8.826	1.00 21.79	D
ATOM	4113	CB	SER	D	144	96.834	39.353	7.627	1.00 20.33	D
ATOM	4114	OG	SER	D	144	96.047	40.511	7.434	1.00 24.32	D
ATOM	4115	C	SER	D	144	95.940	39.440	9.990	1.00 21.43	D
ATOM	4116	O	SER	D	144	94.830	39.317	10.504	1.00 20.74	D
ATOM	4117	N	PHE	D	145	96.809	40.352	10.412	1.00 21.56	D
ATOM	4118	CA	PHE	D	145	96.463	41.235	11.523	1.00 22.54	D
ATOM	4119	CB	PHE	D	145	97.156	40.791	12.817	1.00 22.63	D
ATOM	4120	CG	PHE	D	145	96.896	39.368	13.200	1.00 25.73	D
ATOM	4121	CD1	PHE	D	145	97.565	38.329	12.562	1.00 26.67	D
ATOM	4122	CD2	PHE	D	145	95.987	39.063	14.207	1.00 23.65	D
ATOM	4123	CE1	PHE	D	145	97.333	37.004	12.921	1.00 27.30	D
ATOM	4124	CE2	PHE	D	145	95.750	37.746	14.572	1.00 25.43	D
ATOM	4125	CZ	PHE	D	145	96.426	36.713	13.926	1.00 24.90	D
ATOM	4126	C	PHE	D	145	96.850	42.687	11.299	1.00 22.51	D
ATOM	4127	O	PHE	D	145	97.540	43.028	10.339	1.00 23.97	D
ATOM	4128	N	PHE	D	146	96.371	43.540	12.198	1.00 20.96	D
ATOM	4129	CA	PHE	D	146	96.729	44.946	12.190	1.00 19.68	D
ATOM	4130	CB	PHE	D	146	95.696	45.817	11.439	1.00 17.70	D
ATOM	4131	CG	PHE	D	146	94.392	46.041	12.159	1.00 15.76	D
ATOM	4132	CD1	PHE	D	146	94.201	47.173	12.948	1.00 16.08	D
ATOM	4133	CD2	PHE	D	146	93.321	45.170	11.976	1.00 14.70	D
ATOM	4134	CE1	PHE	D	146	92.961	47.442	13.543	1.00 13.47	D
ATOM	4135	CE2	PHE	D	146	92.080	45.426	12.563	1.00 15.43	D
ATOM	4136	CZ	PHE	D	146	91.900	46.567	13.350	1.00 14.68	D
ATOM	4137	C	PHE	D	146	96.893	45.335	13.654	1.00 19.66	D
ATOM	4138	O	PHE	D	146	96.373	44.672	14.551	1.00 19.92	D
ATOM	4139	N	LYS	D	147	97.666	46.379	13.901	1.00 20.23	D

ATOM	4140	CA	LYS	D	147	97.910	46.817	15.260	1.00 19.84	D
ATOM	4141	CB	LYS	D	147	99.184	46.148	15.796	1.00 21.50	D
ATOM	4142	CG	LYS	D	147	99.651	46.679	17.134	1.00 24.87	D
ATOM	4143	CD	LYS	D	147	100.764	45.832	17.724	1.00 27.18	D
ATOM	4144	CE	LYS	D	147	100.220	44.515	18.253	1.00 31.41	D
ATOM	4145	NZ	LYS	D	147	101.086	43.984	19.341	1.00 32.97	D
ATOM	4146	C	LYS	D	147	98.038	48.324	15.274	1.00 18.69	D
ATOM	4147	O	LYS	D	147	98.603	48.914	14.352	1.00 20.14	D
ATOM	4148	N	ILE	D	148	97.497	48.944	16.314	1.00 18.22	D
ATOM	4149	CA	ILE	D	148	97.530	50.387	16.446	1.00 18.25	D
ATOM	4150	CB	ILE	D	148	96.092	50.942	16.548	1.00 20.80	D
ATOM	4151	CG2	ILE	D	148	96.113	52.459	16.659	1.00 22.44	D
ATOM	4152	CG1	ILE	D	148	95.308	50.533	15.292	1.00 23.89	D
ATOM	4153	CD1	ILE	D	148	93.840	50.858	15.314	1.00 24.42	D
ATOM	4154	C	ILE	D	148	98.369	50.816	17.646	1.00 19.71	D
ATOM	4155	O	ILE	D	148	98.213	50.294	18.757	1.00 17.77	D
ATOM	4156	N	SER	D	149	99.284	51.753	17.395	1.00 19.08	D
ATOM	4157	CA	SER	D	149	100.173	52.278	18.424	1.00 18.19	D
ATOM	4158	CB	SER	D	149	101.633	52.137	17.991	1.00 18.51	D
ATOM	4159	OG	SER	D	149	102.518	52.492	19.040	1.00 19.49	D
ATOM	4160	C	SER	D	149	99.839	53.744	18.646	1.00 18.14	D
ATOM	4161	O	SER	D	149	99.591	54.490	17.693	1.00 18.17	D
ATOM	4162	N	TYR	D	150	99.843	54.155	19.905	1.00 16.95	D
ATOM	4163	CA	TYR	D	150	99.503	55.524	20.261	1.00 16.12	D
ATOM	4164	CB	TYR	D	150	98.310	55.524	21.213	1.00 15.57	D
ATOM	4165	CG	TYR	D	150	97.116	54.750	20.701	1.00 16.81	D
ATOM	4166	CD1	TYR	D	150	96.291	55.276	19.709	1.00 14.33	D
ATOM	4167	CE1	TYR	D	150	95.197	54.554	19.222	1.00 17.50	D
ATOM	4168	CD2	TYR	D	150	96.819	53.486	21.199	1.00 15.90	D
ATOM	4169	CE2	TYR	D	150	95.731	52.760	20.719	1.00 18.41	D
ATOM	4170	CZ	TYR	D	150	94.928	53.297	19.732	1.00 16.27	D
ATOM	4171	OH	TYR	D	150	93.868	52.574	19.244	1.00 20.03	D
ATOM	4172	C	TYR	D	150	100.650	56.266	20.922	1.00 16.35	D
ATOM	4173	O	TYR	D	150	101.438	55.690	21.669	1.00 16.95	D
ATOM	4174	N	LEU	D	151	100.732	57.558	20.643	1.00 16.64	D
ATOM	4175	CA	LEU	D	151	101.760	58.396	21.227	1.00 16.50	D
ATOM	4176	CB	LEU	D	151	102.849	58.705	20.203	1.00 15.48	D
ATOM	4177	CG	LEU	D	151	103.806	59.825	20.639	1.00 17.55	D
ATOM	4178	CD1	LEU	D	151	104.641	59.374	21.834	1.00 16.60	D
ATOM	4179	CD2	LEU	D	151	104.702	60.213	19.476	1.00 16.11	D
ATOM	4180	C	LEU	D	151	101.140	59.701	21.693	1.00 17.56	D
ATOM	4181	O	LEU	D	151	100.577	60.440	20.888	1.00 17.18	D
ATOM	4182	N	THR	D	152	101.233	59.997	22.983	1.00 16.14	D
ATOM	4183	CA	THR	D	152	100.690	61.259	23.448	1.00 19.47	D
ATOM	4184	CB	THR	D	152	100.359	61.248	24.966	1.00 21.24	D
ATOM	4185	OG1	THR	D	152	101.517	60.871	25.725	1.00 25.03	D
ATOM	4186	CG2	THR	D	152	99.214	60.281	25.247	1.00 20.79	D
ATOM	4187	C	THR	D	152	101.717	62.345	23.151	1.00 19.82	D
ATOM	4188	O	THR	D	152	102.921	62.113	23.218	1.00 21.31	D
ATOM	4189	N	LEU	D	153	101.241	63.523	22.781	1.00 20.76	D
ATOM	4190	CA	LEU	D	153	102.143	64.617	22.488	1.00 24.15	D
ATOM	4191	CB	LEU	D	153	102.760	64.450	21.089	1.00 25.45	D
ATOM	4192	CG	LEU	D	153	101.959	64.575	19.785	1.00 27.17	D
ATOM	4193	CD1	LEU	D	153	100.520	64.101	19.986	1.00 27.83	D
ATOM	4194	CD2	LEU	D	153	101.982	66.015	19.319	1.00 27.38	D
ATOM	4195	C	LEU	D	153	101.440	65.952	22.601	1.00 25.73	D
ATOM	4196	O	LEU	D	153	100.208	66.028	22.681	1.00 26.55	D
ATOM	4197	N	LEU	D	154	102.251	67.000	22.640	1.00 26.77	D
ATOM	4198	CA	LEU	D	154	101.781	68.369	22.734	1.00 26.34	D
ATOM	4199	CB	LEU	D	154	102.298	69.027	24.019	1.00 25.08	D
ATOM	4200	CG	LEU	D	154	101.877	70.478	24.288	1.00 26.28	D
ATOM	4201	CD1	LEU	D	154	100.377	70.531	24.570	1.00 24.44	D
ATOM	4202	CD2	LEU	D	154	102.667	71.031	25.477	1.00 23.08	D
ATOM	4203	C	LEU	D	154	102.374	69.063	21.522	1.00 28.41	D
ATOM	4204	O	LEU	D	154	103.577	69.327	21.468	1.00 27.19	D
ATOM	4205	N	PRO	D	155	101.534	69.351	20.523	1.00 30.32	D
ATOM	4206	CD	PRO	D	155	100.109	68.979	20.453	1.00 30.25	D
ATOM	4207	CA	PRO	D	155	101.965	70.014	19.294	1.00 31.71	D
ATOM	4208	CB	PRO	D	155	100.667	70.160	18.510	1.00 31.92	D
ATOM	4209	CG	PRO	D	155	99.861	68.968	18.963	1.00 31.51	D
ATOM	4210	C	PRO	D	155	102.663	71.354	19.508	1.00 35.12	D
ATOM	4211	O	PRO	D	155	102.110	72.275	20.112	1.00 35.64	D
ATOM	4212	N	SER	D	156	103.893	71.436	19.014	1.00 39.00	D
ATOM	4213	CA	SER	D	156	104.706	72.643	19.083	1.00 42.94	D

ATOM	4214	CB	SER	D	156	105.819	72.492	20.121	1.00	43.03	D
ATOM	4215	OG	SER	D	156	105.288	72.385	21.430	1.00	45.30	D
ATOM	4216	C	SER	D	156	105.311	72.763	17.694	1.00	46.03	D
ATOM	4217	O	SER	D	156	104.875	72.084	16.770	1.00	47.06	D
ATOM	4218	N	ALA	D	157	106.316	73.609	17.534	1.00	49.61	D
ATOM	4219	CA	ALA	D	157	106.931	73.756	16.222	1.00	51.03	D
ATOM	4220	CB	ALA	D	157	106.977	75.231	15.828	1.00	51.20	D
ATOM	4221	C	ALA	D	157	108.334	73.163	16.195	1.00	51.50	D
ATOM	4222	O	ALA	D	157	108.985	73.147	15.150	1.00	52.20	D
ATOM	4223	N	GLU	D	158	108.797	72.669	17.339	1.00	52.37	D
ATOM	4224	CA	GLU	D	158	110.141	72.103	17.411	1.00	53.43	D
ATOM	4225	CB	GLU	D	158	110.946	72.785	18.524	1.00	57.17	D
ATOM	4226	CG	GLU	D	158	110.401	72.570	19.934	1.00	61.50	D
ATOM	4227	CD	GLU	D	158	109.278	73.529	20.291	1.00	63.75	D
ATOM	4228	OE1	GLU	D	158	108.757	73.431	21.425	1.00	63.56	D
ATOM	4229	OE2	GLU	D	158	108.922	74.381	19.445	1.00	65.17	D
ATOM	4230	C	GLU	D	158	110.190	70.592	17.614	1.00	51.03	D
ATOM	4231	O	GLU	D	158	111.103	70.084	18.265	1.00	51.07	D
ATOM	4232	N	GLU	D	159	109.219	69.876	17.057	1.00	47.47	D
ATOM	4233	CA	GLU	D	159	109.185	68.425	17.193	1.00	46.22	D
ATOM	4234	CB	GLU	D	159	108.337	68.013	18.406	1.00	47.11	D
ATOM	4235	CG	GLU	D	159	109.127	67.692	19.671	1.00	48.53	D
ATOM	4236	CD	GLU	D	159	108.268	67.042	20.751	1.00	50.37	D
ATOM	4237	OE1	GLU	D	159	107.319	67.694	21.238	1.00	50.39	D
ATOM	4238	OE2	GLU	D	159	108.537	65.873	21.112	1.00	50.03	D
ATOM	4239	C	GLU	D	159	108.641	67.714	15.960	1.00	43.84	D
ATOM	4240	O	GLU	D	159	107.515	67.974	15.535	1.00	44.12	D
ATOM	4241	N	SER	D	160	109.443	66.825	15.380	1.00	39.56	D
ATOM	4242	CA	SER	D	160	108.993	66.054	14.229	1.00	37.29	D
ATOM	4243	CB	SER	D	160	109.971	66.172	13.055	1.00	37.41	D
ATOM	4244	OG	SER	D	160	111.070	65.298	13.206	1.00	41.72	D
ATOM	4245	C	SER	D	160	108.933	64.615	14.734	1.00	35.08	D
ATOM	4246	O	SER	D	160	109.754	64.207	15.557	1.00	33.66	D
ATOM	4247	N	TYR	D	161	107.961	63.846	14.260	1.00	32.11	D
ATOM	4248	CA	TYR	D	161	107.828	62.478	14.728	1.00	29.69	D
ATOM	4249	CB	TYR	D	161	106.550	62.315	15.547	1.00	29.62	D
ATOM	4250	CG	TYR	D	161	106.347	63.349	16.620	1.00	29.33	D
ATOM	4251	CD1	TYR	D	161	105.761	64.577	16.327	1.00	31.31	D
ATOM	4252	CE1	TYR	D	161	105.513	65.515	17.329	1.00	32.70	D
ATOM	4253	CD2	TYR	D	161	106.695	63.085	17.937	1.00	30.13	D
ATOM	4254	CE2	TYR	D	161	106.457	64.013	18.947	1.00	30.43	D
ATOM	4255	CZ	TYR	D	161	105.863	65.223	18.638	1.00	31.92	D
ATOM	4256	OH	TYR	D	161	105.592	66.128	19.643	1.00	35.12	D
ATOM	4257	C	TYR	D	161	107.820	61.441	13.627	1.00	29.60	D
ATOM	4258	O	TYR	D	161	107.493	61.728	12.473	1.00	29.45	D
ATOM	4259	N	ASP	D	162	108.172	60.221	14.005	1.00	29.35	D
ATOM	4260	CA	ASP	D	162	108.201	59.109	13.075	1.00	30.15	D
ATOM	4261	CB	ASP	D	162	109.618	58.863	12.548	1.00	34.90	D
ATOM	4262	CG	ASP	D	162	110.154	60.016	11.733	1.00	37.70	D
ATOM	4263	OD1	ASP	D	162	109.669	60.218	10.597	1.00	40.13	D
ATOM	4264	OD2	ASP	D	162	111.061	60.716	12.235	1.00	38.68	D
ATOM	4265	C	ASP	D	162	107.759	57.851	13.784	1.00	29.84	D
ATOM	4266	O	ASP	D	162	108.010	57.672	14.978	1.00	26.72	D
ATOM	4267	N	CYS	D	163	107.088	56.984	13.039	1.00	29.31	D
ATOM	4268	CA	CYS	D	163	106.684	55.700	13.569	1.00	29.59	D
ATOM	4269	C	CYS	D	163	107.689	54.769	12.902	1.00	28.04	D
ATOM	4270	O	CYS	D	163	107.822	54.772	11.685	1.00	26.22	D
ATOM	4271	CB	CYS	D	163	105.265	55.326	13.134	1.00	29.11	D
ATOM	4272	SG	CYS	D	163	104.703	53.760	13.878	1.00	34.32	D
ATOM	4273	N	LYS	D	164	108.417	54.001	13.699	1.00	29.03	D
ATOM	4274	CA	LYS	D	164	109.404	53.072	13.161	1.00	29.67	D
ATOM	4275	CB	LYS	D	164	110.730	53.238	13.911	1.00	32.54	D
ATOM	4276	CG	LYS	D	164	111.874	52.352	13.416	1.00	34.76	D
ATOM	4277	CD	LYS	D	164	113.109	52.528	14.297	1.00	34.79	D
ATOM	4278	CE	LYS	D	164	114.254	51.630	13.850	1.00	38.29	D
ATOM	4279	NZ	LYS	D	164	115.425	51.702	14.775	1.00	36.58	D
ATOM	4280	C	LYS	D	164	108.863	51.651	13.322	1.00	28.94	D
ATOM	4281	O	LYS	D	164	108.642	51.189	14.443	1.00	29.32	D
ATOM	4282	N	VAL	D	165	108.632	50.974	12.197	1.00	27.33	D
ATOM	4283	CA	VAL	D	165	108.100	49.618	12.212	1.00	26.58	D
ATOM	4284	CB	VAL	D	165	106.797	49.516	11.359	1.00	27.12	D
ATOM	4285	CG1	VAL	D	165	106.199	48.122	11.462	1.00	25.56	D
ATOM	4286	CG2	VAL	D	165	105.787	50.544	11.827	1.00	27.97	D
ATOM	4287	C	VAL	D	165	109.113	48.600	11.690	1.00	26.91	D

ATOM	4288	O	VAL D 165	109.621	48.720	10.583	1.00	25.56	D
ATOM	4289	N	GLU D 166	109.414	47.606	12.513	1.00	28.75	D
ATOM	4290	CA	GLU D 166	110.338	46.544	12.139	1.00	30.67	D
ATOM	4291	CB	GLU D 166	111.445	46.410	13.194	1.00	33.57	D
ATOM	4292	CG	GLU D 166	112.452	47.565	13.142	1.00	41.68	D
ATOM	4293	CD	GLU D 166	113.506	47.526	14.244	1.00	46.12	D
ATOM	4294	OE1	GLU D 166	114.482	48.304	14.146	1.00	49.01	D
ATOM	4295	OE2	GLU D 166	113.363	46.736	15.206	1.00	49.40	D
ATOM	4296	C	GLU D 166	109.543	45.243	12.008	1.00	30.18	D
ATOM	4297	O	GLU D 166	108.737	44.900	12.878	1.00	28.51	D
ATOM	4298	N	HIS D 167	109.759	44.535	10.907	1.00	29.48	D
ATOM	4299	CA	HIS D 167	109.056	43.281	10.648	1.00	30.29	D
ATOM	4300	CB	HIS D 167	107.686	43.569	10.025	1.00	29.56	D
ATOM	4301	CG	HIS D 167	106.808	42.363	9.903	1.00	30.02	D
ATOM	4302	CD2	HIS D 167	106.562	41.541	8.856	1.00	29.91	D
ATOM	4303	ND1	HIS D 167	106.068	41.871	10.957	1.00	31.27	D
ATOM	4304	CE1	HIS D 167	105.404	40.798	10.564	1.00	28.43	D
ATOM	4305	NE2	HIS D 167	105.687	40.576	9.293	1.00	28.97	D
ATOM	4306	C	HIS D 167	109.886	42.440	9.684	1.00	30.36	D
ATOM	4307	O	HIS D 167	110.607	42.976	8.842	1.00	30.66	D
ATOM	4308	N	TRP D 168	109.775	41.122	9.801	1.00	31.13	D
ATOM	4309	CA	TRP D 168	110.521	40.219	8.930	1.00	32.08	D
ATOM	4310	CB	TRP D 168	110.270	38.765	9.336	1.00	28.28	D
ATOM	4311	CG	TRP D 168	110.665	38.475	10.739	1.00	26.36	D
ATOM	4312	CD2	TRP D 168	110.031	37.556	11.635	1.00	25.51	D
ATOM	4313	CE2	TRP D 168	110.759	37.578	12.842	1.00	26.35	D
ATOM	4314	CE3	TRP D 168	108.916	36.715	11.534	1.00	24.88	D
ATOM	4315	CD1	TRP D 168	111.721	39.004	11.416	1.00	27.27	D
ATOM	4316	NE1	TRP D 168	111.786	38.471	12.682	1.00	28.25	D
ATOM	4317	CZ2	TRP D 168	110.412	36.791	13.943	1.00	27.00	D
ATOM	4318	CZ3	TRP D 168	108.568	35.932	12.628	1.00	25.90	D
ATOM	4319	CH2	TRP D 168	109.315	35.976	13.817	1.00	26.65	D
ATOM	4320	C	TRP D 168	110.180	40.403	7.452	1.00	33.22	D
ATOM	4321	O	TRP D 168	111.011	40.139	6.582	1.00	33.90	D
ATOM	4322	N	GLY D 169	108.959	40.853	7.174	1.00	34.75	D
ATOM	4323	CA	GLY D 169	108.533	41.060	5.797	1.00	36.14	D
ATOM	4324	C	GLY D 169	109.056	42.359	5.215	1.00	37.80	D
ATOM	4325	O	GLY D 169	108.635	42.796	4.139	1.00	36.95	D
ATOM	4326	N	LEU D 170	109.979	42.981	5.938	1.00	38.89	D
ATOM	4327	CA	LEU D 170	110.578	44.234	5.509	1.00	40.79	D
ATOM	4328	CB	LEU D 170	110.212	45.356	6.480	1.00	39.77	D
ATOM	4329	CG	LEU D 170	108.745	45.765	6.581	1.00	39.57	D
ATOM	4330	CD1	LEU D 170	108.592	46.809	7.671	1.00	38.10	D
ATOM	4331	CD2	LEU D 170	108.267	46.308	5.243	1.00	39.58	D
ATOM	4332	C	LEU D 170	112.092	44.085	5.465	1.00	42.12	D
ATOM	4333	O	LEU D 170	112.688	43.506	6.370	1.00	41.54	D
ATOM	4334	N	ASP D 171	112.706	44.613	4.411	1.00	45.36	D
ATOM	4335	CA	ASP D 171	114.158	44.559	4.252	1.00	48.35	D
ATOM	4336	CB	ASP D 171	114.539	44.947	2.820	1.00	50.69	D
ATOM	4337	CG	ASP D 171	113.467	45.775	2.137	1.00	52.75	D
ATOM	4338	OD1	ASP D 171	113.076	46.827	2.689	1.00	54.19	D
ATOM	4339	OD2	ASP D 171	113.012	45.372	1.046	1.00	54.32	D
ATOM	4340	C	ASP D 171	114.849	45.485	5.255	1.00	48.43	D
ATOM	4341	O	ASP D 171	115.816	45.090	5.910	1.00	48.29	D
ATOM	4342	N	LYS D 172	114.348	46.715	5.364	1.00	48.92	D
ATOM	4343	CA	LYS D 172	114.883	47.707	6.299	1.00	49.86	D
ATOM	4344	CB	LYS D 172	115.502	48.898	5.552	1.00	51.58	D
ATOM	4345	CG	LYS D 172	116.667	48.566	4.637	1.00	55.86	D
ATOM	4346	CD	LYS D 172	116.203	47.963	3.316	1.00	58.23	D
ATOM	4347	CE	LYS D 172	115.408	48.966	2.493	1.00	59.62	D
ATOM	4348	NZ	LYS D 172	114.946	48.368	1.211	1.00	59.53	D
ATOM	4349	C	LYS D 172	113.734	48.224	7.165	1.00	48.46	D
ATOM	4350	O	LYS D 172	112.564	48.026	6.833	1.00	48.43	D
ATOM	4351	N	PRO D 173	114.050	48.885	8.291	1.00	46.54	D
ATOM	4352	CD	PRO D 173	115.355	49.048	8.954	1.00	46.03	D
ATOM	4353	CA	PRO D 173	112.974	49.400	9.137	1.00	44.41	D
ATOM	4354	CB	PRO D 173	113.722	50.029	10.305	1.00	44.19	D
ATOM	4355	CG	PRO D 173	114.950	49.197	10.399	1.00	45.63	D
ATOM	4356	C	PRO D 173	112.180	50.430	8.348	1.00	43.26	D
ATOM	4357	O	PRO D 173	112.746	51.197	7.570	1.00	43.42	D
ATOM	4358	N	LEU D 174	110.869	50.434	8.532	1.00	41.53	D
ATOM	4359	CA	LEU D 174	110.023	51.381	7.829	1.00	39.96	D
ATOM	4360	CB	LEU D 174	108.675	50.730	7.523	1.00	40.30	D
ATOM	4361	CG	LEU D 174	107.900	51.223	6.303	1.00	40.55	D

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ATOM	4362	CD1	LEU	D	174	106.637	50.397	6.151	1.00	42.25	D
ATOM	4363	CD2	LEU	D	174	107.568	52.698	6.448	1.00	42.67	D
ATOM	4364	C	LEU	D	174	109.845	52.586	8.753	1.00	39.80	D
ATOM	4365	O	LEU	D	174	109.645	52.420	9.955	1.00	39.99	D
ATOM	4366	N	LEU	D	175	109.947	53.792	8.200	1.00	38.49	D
ATOM	4367	CA	LEU	D	175	109.787	55.016	8.983	1.00	38.04	D
ATOM	4368	CB	LEU	D	175	111.095	55.812	9.045	1.00	38.62	D
ATOM	4369	CG	LEU	D	175	112.127	55.442	10.113	1.00	38.70	D
ATOM	4370	CD1	LEU	D	175	111.518	55.648	11.489	1.00	39.24	D
ATOM	4371	CD2	LEU	D	175	112.577	54.001	9.936	1.00	40.07	D
ATOM	4372	C	LEU	D	175	108.712	55.892	8.372	1.00	37.31	D
ATOM	4373	O	LEU	D	175	108.885	56.432	7.282	1.00	38.54	D
ATOM	4374	N	LYS	D	176	107.599	56.033	9.076	1.00	35.14	D
ATOM	4375	CA	LYS	D	176	106.511	56.850	8.577	1.00	34.26	D
ATOM	4376	CB	LYS	D	176	105.175	56.124	8.768	1.00	33.88	D
ATOM	4377	CG	LYS	D	176	104.204	56.325	7.620	1.00	36.72	D
ATOM	4378	CD	LYS	D	176	104.829	55.887	6.295	1.00	37.68	D
ATOM	4379	CE	LYS	D	176	103.820	55.913	5.155	1.00	39.32	D
ATOM	4380	NZ	LYS	D	176	103.195	57.254	4.974	1.00	40.75	D
ATOM	4381	C	LYS	D	176	106.523	58.166	9.335	1.00	32.22	D
ATOM	4382	O	LYS	D	176	106.272	58.204	10.537	1.00	32.35	D
ATOM	4383	N	HIS	D	177	106.825	59.243	8.625	1.00	29.85	D
ATOM	4384	CA	HIS	D	177	106.897	60.563	9.229	1.00	29.87	D
ATOM	4385	CB	HIS	D	177	107.836	61.456	8.411	1.00	30.84	D
ATOM	4386	CG	HIS	D	177	108.014	62.830	8.979	1.00	31.41	D
ATOM	4387	CD2	HIS	D	177	107.607	64.042	8.529	1.00	32.01	D
ATOM	4388	ND1	HIS	D	177	108.695	63.067	10.155	1.00	32.16	D
ATOM	4389	CE1	HIS	D	177	108.704	64.365	10.402	1.00	30.49	D
ATOM	4390	NE2	HIS	D	177	108.051	64.979	9.431	1.00	31.08	D
ATOM	4391	C	HIS	D	177	105.532	61.228	9.332	1.00	29.28	D
ATOM	4392	O	HIS	D	177	104.709	61.121	8.429	1.00	27.97	D
ATOM	4393	N	TRP	D	178	105.295	61.922	10.439	1.00	29.05	D
ATOM	4394	CA	TRP	D	178	104.031	62.617	10.619	1.00	29.38	D
ATOM	4395	CB	TRP	D	178	103.518	62.464	12.048	1.00	26.73	D
ATOM	4396	CG	TRP	D	178	102.205	63.165	12.243	1.00	27.32	D
ATOM	4397	CD2	TRP	D	178	101.939	64.262	13.122	1.00	24.87	D
ATOM	4398	CE2	TRP	D	178	100.580	64.608	12.959	1.00	26.97	D
ATOM	4399	CE3	TRP	D	178	102.714	64.986	14.033	1.00	26.15	D
ATOM	4400	CD1	TRP	D	178	101.028	62.898	11.599	1.00	26.41	D
ATOM	4401	NE1	TRP	D	178	100.050	63.759	12.023	1.00	25.31	D
ATOM	4402	CZ2	TRP	D	178	99.980	65.649	13.675	1.00	25.60	D
ATOM	4403	CZ3	TRP	D	178	102.118	66.021	14.746	1.00	27.98	D
ATOM	4404	CH2	TRP	D	178	100.763	66.340	14.562	1.00	27.02	D
ATOM	4405	C	TRP	D	178	104.185	64.100	10.294	1.00	30.33	D
ATOM	4406	O	TRP	D	178	104.756	64.824	11.143	1.00	29.85	D
ATOM	4407	OXT	TRP	D	178	103.745	64.512	9.193	1.00	32.23	D
ATOM	4408	CB	SER	E	3	113.641	35.776	8.019	1.00	59.19	E
ATOM	4409	OG	SER	E	3	112.349	35.748	8.608	1.00	59.65	E
ATOM	4410	C	SER	E	3	114.352	33.977	9.601	1.00	57.92	E
ATOM	4411	O	SER	E	3	114.571	32.945	8.970	1.00	57.45	E
ATOM	4412	N	SER	E	3	116.055	35.305	8.352	1.00	59.31	E
ATOM	4413	CA	SER	E	3	114.719	35.342	9.020	1.00	58.85	E
ATOM	4414	N	PRO	E	4	113.799	33.958	10.824	1.00	56.65	E
ATOM	4415	CD	PRO	E	4	113.679	35.092	11.759	1.00	56.20	E
ATOM	4416	CA	PRO	E	4	113.403	32.704	11.472	1.00	55.50	E
ATOM	4417	CB	PRO	E	4	113.362	33.086	12.946	1.00	56.49	E
ATOM	4418	CG	PRO	E	4	112.870	34.493	12.893	1.00	56.56	E
ATOM	4419	C	PRO	E	4	112.046	32.217	10.957	1.00	53.68	E
ATOM	4420	O	PRO	E	4	111.168	33.024	10.648	1.00	54.06	E
ATOM	4421	N	GLU	E	5	111.875	30.903	10.855	1.00	51.52	E
ATOM	4422	CA	GLU	E	5	110.610	30.360	10.373	1.00	49.69	E
ATOM	4423	CB	GLU	E	5	110.831	29.007	9.676	1.00	53.42	E
ATOM	4424	CG	GLU	E	5	111.305	27.867	10.561	1.00	57.99	E
ATOM	4425	CD	GLU	E	5	111.671	26.626	9.758	1.00	60.86	E
ATOM	4426	OE1	GLU	E	5	110.857	26.196	8.908	1.00	62.41	E
ATOM	4427	OE2	GLU	E	5	112.772	26.077	9.979	1.00	63.42	E
ATOM	4428	C	GLU	E	5	109.619	30.231	11.525	1.00	45.48	E
ATOM	4429	O	GLU	E	5	109.919	29.644	12.564	1.00	46.07	E
ATOM	4430	N	ASP	E	6	108.436	30.800	11.337	1.00	40.87	E
ATOM	4431	CA	ASP	E	6	107.403	30.782	12.363	1.00	36.20	E
ATOM	4432	CB	ASP	E	6	106.911	32.214	12.617	1.00	35.53	E
ATOM	4433	CG	ASP	E	6	105.995	32.323	13.827	1.00	33.60	E
ATOM	4434	OD1	ASP	E	6	105.185	33.268	13.864	1.00	34.88	E
ATOM	4435	OD2	ASP	E	6	106.089	31.487	14.748	1.00	33.84	E

ATOM	4436	C	ASP	E	6	106.229	29.915	11.938	1.00	33.07	E
ATOM	4437	O	ASP	E	6	105.882	29.867	10.762	1.00	32.95	E
ATOM	4438	N	PHE	E	7	105.632	29.228	12.906	1.00	31.08	E
ATOM	4439	CA	PHE	E	7	104.466	28.380	12.669	1.00	29.18	E
ATOM	4440	CB	PHE	E	7	104.760	26.950	13.116	1.00	31.11	E
ATOM	4441	CG	PHE	E	7	105.833	26.278	12.305	1.00	31.97	E
ATOM	4442	CD1	PHE	E	7	105.544	25.745	11.053	1.00	31.67	E
ATOM	4443	CD2	PHE	E	7	107.141	26.200	12.782	1.00	32.49	E
ATOM	4444	CE1	PHE	E	7	106.546	25.141	10.282	1.00	33.41	E
ATOM	4445	CE2	PHE	E	7	108.148	25.602	12.023	1.00	32.29	E
ATOM	4446	CZ	PHE	E	7	107.850	25.071	10.770	1.00	31.62	E
ATOM	4447	C	PHE	E	7	103.345	28.994	13.504	1.00	27.19	E
ATOM	4448	O	PHE	E	7	103.483	29.151	14.715	1.00	25.77	E
ATOM	4449	N	VAL	E	8	102.238	29.340	12.855	1.00	25.52	E
ATOM	4450	CA	VAL	E	8	101.127	29.998	13.538	1.00	23.97	E
ATOM	4451	CB	VAL	E	8	100.903	31.411	12.949	1.00	22.51	E
ATOM	4452	CG1	VAL	E	8	99.789	32.130	13.703	1.00	20.58	E
ATOM	4453	CG2	VAL	E	8	102.205	32.211	13.002	1.00	22.51	E
ATOM	4454	C	VAL	E	8	99.785	29.275	13.510	1.00	24.21	E
ATOM	4455	O	VAL	E	8	99.369	28.736	12.485	1.00	25.26	E
ATOM	4456	N	TYR	E	9	99.096	29.288	14.643	1.00	23.98	E
ATOM	4457	CA	TYR	E	9	97.786	28.663	14.724	1.00	23.53	E
ATOM	4458	CB	TYR	E	9	97.796	27.505	15.718	1.00	24.07	E
ATOM	4459	CG	TYR	E	9	96.562	26.640	15.627	1.00	25.27	E
ATOM	4460	CD1	TYR	E	9	96.570	25.460	14.889	1.00	27.68	E
ATOM	4461	CE1	TYR	E	9	95.435	24.658	14.801	1.00	27.67	E
ATOM	4462	CD2	TYR	E	9	95.384	27.002	16.272	1.00	24.82	E
ATOM	4463	CE2	TYR	E	9	94.245	26.211	16.191	1.00	25.29	E
ATOM	4464	CZ	TYR	E	9	94.277	25.040	15.458	1.00	26.82	E
ATOM	4465	OH	TYR	E	9	93.163	24.240	15.403	1.00	27.65	E
ATOM	4466	C	TYR	E	9	96.775	29.707	15.179	1.00	23.14	E
ATOM	4467	O	TYR	E	9	97.037	30.476	16.106	1.00	23.66	E
ATOM	4468	N	GLN	E	10	95.622	29.739	14.523	1.00	21.64	E
ATOM	4469	CA	GLN	E	10	94.582	30.686	14.892	1.00	21.14	E
ATOM	4470	CB	GLN	E	10	94.438	31.793	13.843	1.00	20.35	E
ATOM	4471	CG	GLN	E	10	95.677	32.598	13.529	1.00	19.58	E
ATOM	4472	CD	GLN	E	10	95.410	33.655	12.461	1.00	18.44	E
ATOM	4473	OE1	GLN	E	10	94.498	34.474	12.593	1.00	19.00	E
ATOM	4474	NE2	GLN	E	10	96.206	33.640	11.400	1.00	18.89	E
ATOM	4475	C	GLN	E	10	93.232	29.997	15.006	1.00	19.74	E
ATOM	4476	O	GLN	E	10	92.904	29.113	14.223	1.00	21.71	E
ATOM	4477	N	PHE	E	11	92.450	30.408	15.991	1.00	19.13	E
ATOM	4478	CA	PHE	E	11	91.108	29.887	16.145	1.00	16.86	E
ATOM	4479	CB	PHE	E	11	90.981	28.881	17.271	1.00	16.74	E
ATOM	4480	CG	PHE	E	11	89.562	28.466	17.517	1.00	18.71	E
ATOM	4481	CD1	PHE	E	11	88.910	27.615	16.626	1.00	21.10	E
ATOM	4482	CD2	PHE	E	11	88.849	28.985	18.595	1.00	18.11	E
ATOM	4483	CE1	PHE	E	11	87.559	27.290	16.807	1.00	22.40	E
ATOM	4484	CE2	PHE	E	11	87.499	28.671	18.789	1.00	15.75	E
ATOM	4485	CZ	PHE	E	11	86.854	27.826	17.898	1.00	21.25	E
ATOM	4486	C	PHE	E	11	90.218	31.069	16.451	1.00	17.10	E
ATOM	4487	O	PHE	E	11	90.461	31.819	17.406	1.00	13.97	E
ATOM	4488	N	LYS	E	12	89.197	31.241	15.622	1.00	16.07	E
ATOM	4489	CA	LYS	E	12	88.266	32.338	15.789	1.00	16.96	E
ATOM	4490	CB	LYS	E	12	88.308	33.246	14.564	1.00	17.05	E
ATOM	4491	CG	LYS	E	12	89.703	33.748	14.200	1.00	17.57	E
ATOM	4492	CD	LYS	E	12	89.663	34.535	12.888	1.00	18.92	E
ATOM	4493	CE	LYS	E	12	91.018	35.136	12.532	1.00	17.07	E
ATOM	4494	NZ	LYS	E	12	90.920	36.063	11.362	1.00	14.26	E
ATOM	4495	C	LYS	E	12	86.856	31.803	15.987	1.00	17.87	E
ATOM	4496	O	LYS	E	12	86.354	31.039	15.165	1.00	16.82	E
ATOM	4497	N	GLY	E	13	86.235	32.195	17.098	1.00	18.19	E
ATOM	4498	CA	GLY	E	13	84.875	31.776	17.391	1.00	19.62	E
ATOM	4499	C	GLY	E	13	83.991	32.939	17.010	1.00	19.93	E
ATOM	4500	O	GLY	E	13	83.539	33.695	17.868	1.00	21.65	E
ATOM	4501	N	MET	E	14	83.728	33.070	15.715	1.00	19.89	E
ATOM	4502	CA	MET	E	14	82.947	34.184	15.197	1.00	20.54	E
ATOM	4503	CB	MET	E	14	83.430	34.490	13.785	1.00	21.02	E
ATOM	4504	CG	MET	E	14	84.937	34.657	13.751	1.00	23.04	E
ATOM	4505	SD	MET	E	14	85.587	35.218	12.190	1.00	25.32	E
ATOM	4506	CE	MET	E	14	85.218	36.938	12.284	1.00	20.32	E
ATOM	4507	C	MET	E	14	81.429	34.078	15.219	1.00	20.83	E
ATOM	4508	O	MET	E	14	80.859	32.999	15.101	1.00	20.77	E
ATOM	4509	N	CYS	E	15	80.789	35.232	15.377	1.00	20.66	E

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ATOM	4510	CA	CYS	E	15	79.332	35.336	15.418	1.00 22.09	E
ATOM	4511	C	CYS	E	15	78.882	36.495	14.524	1.00 21.39	E
ATOM	4512	O	CYS	E	15	79.393	37.614	14.644	1.00 19.38	E
ATOM	4513	CB	CYS	E	15	78.841	35.616	16.848	1.00 22.10	E
ATOM	4514	SG	CYS	E	15	78.970	34.281	18.094	1.00 26.75	E
ATOM	4515	N	TYR	E	16	77.931	36.229	13.633	1.00 20.94	E
ATOM	4516	CA	TYR	E	16	77.408	37.270	12.752	1.00 21.23	E
ATOM	4517	CB	TYR	E	16	77.548	36.858	11.287	1.00 18.37	E
ATOM	4518	CG	TYR	E	16	78.972	36.574	10.876	1.00 19.23	E
ATOM	4519	CD1	TYR	E	16	79.576	35.354	11.178	1.00 18.71	E
ATOM	4520	CE1	TYR	E	16	80.875	35.084	10.789	1.00 18.69	E
ATOM	4521	CD2	TYR	E	16	79.715	37.524	10.178	1.00 20.25	E
ATOM	4522	CE2	TYR	E	16	81.022	37.270	9.785	1.00 17.18	E
ATOM	4523	CZ	TYR	E	16	81.595	36.047	10.088	1.00 21.03	E
ATOM	4524	OH	TYR	E	16	82.872	35.775	9.662	1.00 22.99	E
ATOM	4525	C	TYR	E	16	75.938	37.543	13.085	1.00 22.17	E
ATOM	4526	O	TYR	E	16	75.132	36.612	13.199	1.00 21.71	E
ATOM	4527	N	PHE	E	17	75.607	38.825	13.247	1.00 23.05	E
ATOM	4528	CA	PHE	E	17	74.254	39.263	13.591	1.00 23.67	E
ATOM	4529	CB	PHE	E	17	74.261	39.988	14.942	1.00 22.49	E
ATOM	4530	CG	PHE	E	17	74.813	39.172	16.084	1.00 25.10	E
ATOM	4531	CD1	PHE	E	17	74.007	38.270	16.772	1.00 24.22	E
ATOM	4532	CD2	PHE	E	17	76.140	39.318	16.482	1.00 24.67	E
ATOM	4533	CE1	PHE	E	17	74.516	37.526	17.844	1.00 24.68	E
ATOM	4534	CE2	PHE	E	17	76.656	38.579	17.548	1.00 24.45	E
ATOM	4535	CZ	PHE	E	17	75.843	37.684	18.228	1.00 24.13	E
ATOM	4536	C	PHE	E	17	73.673	40.223	12.549	1.00 25.10	E
ATOM	4537	O	PHE	E	17	74.390	41.034	11.971	1.00 24.65	E
ATOM	4538	N	THR	E	18	72.365	40.122	12.333	1.00 27.15	E
ATOM	4539	CA	THR	E	18	71.638	40.983	11.405	1.00 29.69	E
ATOM	4540	CB	THR	E	18	71.609	40.397	9.978	1.00 29.46	E
ATOM	4541	OG1	THR	E	18	72.949	40.252	9.500	1.00 32.31	E
ATOM	4542	CG2	THR	E	18	70.863	41.321	9.032	1.00 28.09	E
ATOM	4543	C	THR	E	18	70.217	41.080	11.950	1.00 31.56	E
ATOM	4544	O	THR	E	18	69.638	40.071	12.355	1.00 32.09	E
ATOM	4545	N	ASN	E	19	69.661	42.290	11.969	1.00 33.38	E
ATOM	4546	CA	ASN	E	19	68.316	42.495	12.497	1.00 35.02	E
ATOM	4547	CB	ASN	E	19	67.279	41.755	11.647	1.00 37.99	E
ATOM	4548	CG	ASN	E	19	66.779	42.587	10.489	1.00 42.21	E
ATOM	4549	OD1	ASN	E	19	66.271	43.695	10.687	1.00 47.70	E
ATOM	4550	ND2	ASN	E	19	66.910	42.063	9.273	1.00 43.13	E
ATOM	4551	C	ASN	E	19	68.264	41.977	13.924	1.00 34.10	E
ATOM	4552	O	ASN	E	19	67.487	41.077	14.233	1.00 34.27	E
ATOM	4553	N	GLY	E	20	69.088	42.553	14.795	1.00 33.50	E
ATOM	4554	CA	GLY	E	20	69.120	42.106	16.175	1.00 33.61	E
ATOM	4555	C	GLY	E	20	69.575	40.663	16.175	1.00 33.98	E
ATOM	4556	O	GLY	E	20	70.580	40.343	15.541	1.00 34.56	E
ATOM	4557	N	THR	E	21	68.847	39.789	16.866	1.00 34.08	E
ATOM	4558	CA	THR	E	21	69.198	38.372	16.897	1.00 35.71	E
ATOM	4559	CB	THR	E	21	69.193	37.809	18.335	1.00 37.69	E
ATOM	4560	OG1	THR	E	21	67.907	38.026	18.930	1.00 39.78	E
ATOM	4561	CG2	THR	E	21	70.268	38.480	19.174	1.00 38.05	E
ATOM	4562	C	THR	E	21	68.251	37.517	16.050	1.00 35.19	E
ATOM	4563	O	THR	E	21	68.092	36.324	16.303	1.00 36.08	E
ATOM	4564	N	GLU	E	22	67.619	38.129	15.052	1.00 34.15	E
ATOM	4565	CA	GLU	E	22	66.705	37.405	14.176	1.00 34.08	E
ATOM	4566	CB	GLU	E	22	65.868	38.388	13.354	1.00 33.12	E
ATOM	4567	CG	GLU	E	22	64.781	39.073	14.164	1.00 33.66	E
ATOM	4568	CD	GLU	E	22	64.173	40.266	13.451	1.00 35.85	E
ATOM	4569	OE1	GLU	E	22	63.865	40.151	12.244	1.00 35.10	E
ATOM	4570	OE2	GLU	E	22	63.995	41.317	14.105	1.00 38.34	E
ATOM	4571	C	GLU	E	22	67.523	36.503	13.265	1.00 33.80	E
ATOM	4572	O	GLU	E	22	67.205	35.329	13.092	1.00 34.50	E
ATOM	4573	N	ARG	E	23	68.574	37.065	12.678	1.00 33.59	E
ATOM	4574	CA	ARG	E	23	69.467	36.298	11.818	1.00 33.75	E
ATOM	4575	CB	ARG	E	23	69.703	36.996	10.470	1.00 36.33	E
ATOM	4576	CG	ARG	E	23	68.599	36.815	9.434	1.00 42.06	E
ATOM	4577	CD	ARG	E	23	67.342	37.577	9.813	1.00 47.83	E
ATOM	4578	NE	ARG	E	23	66.408	37.696	8.695	1.00 51.02	E
ATOM	4579	CZ	ARG	E	23	65.349	38.502	8.690	1.00 52.66	E
ATOM	4580	NH1	ARG	E	23	65.087	39.263	9.747	1.00 50.82	E
ATOM	4581	NH2	ARG	E	23	64.555	38.555	7.626	1.00 53.53	E
ATOM	4582	C	ARG	E	23	70.788	36.177	12.560	1.00 30.98	E
ATOM	4583	O	ARG	E	23	71.465	37.172	12.827	1.00 30.90	E

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ATOM	4584	N	VAL	E	24	71.149	34.955	12.909	1.00	28.33	E
ATOM	4585	CA	VAL	E	24	72.394	34.735	13.621	1.00	25.06	E
ATOM	4586	CB	VAL	E	24	72.148	34.500	15.129	1.00	22.98	E
ATOM	4587	CG1	VAL	E	24	73.456	34.106	15.817	1.00	21.05	E
ATOM	4588	CG2	VAL	E	24	71.582	35.762	15.763	1.00	21.04	E
ATOM	4589	C	VAL	E	24	73.144	33.550	13.049	1.00	23.08	E
ATOM	4590	O	VAL	E	24	72.600	32.458	12.914	1.00	24.17	E
ATOM	4591	N	ARG	E	25	74.398	33.778	12.694	1.00	23.02	E
ATOM	4592	CA	ARG	E	25	75.223	32.718	12.156	1.00	23.30	E
ATOM	4593	CB	ARG	E	25	75.511	32.930	10.659	1.00	24.06	E
ATOM	4594	CG	ARG	E	25	76.653	32.044	10.176	1.00	25.99	E
ATOM	4595	CD	ARG	E	25	76.470	31.478	8.774	1.00	28.29	E
ATOM	4596	NE	ARG	E	25	76.468	32.502	7.743	1.00	29.69	E
ATOM	4597	CZ	ARG	E	25	76.786	32.287	6.466	1.00	29.57	E
ATOM	4598	NH1	ARG	E	25	77.145	31.075	6.047	1.00	27.28	E
ATOM	4599	NH2	ARG	E	25	76.733	33.293	5.604	1.00	26.98	E
ATOM	4600	C	ARG	E	25	76.535	32.631	12.916	1.00	22.65	E
ATOM	4601	O	ARG	E	25	77.261	33.620	13.041	1.00	22.47	E
ATOM	4602	N	LEU	E	26	76.828	31.444	13.433	1.00	21.04	E
ATOM	4603	CA	LEU	E	26	78.069	31.227	14.152	1.00	21.94	E
ATOM	4604	CB	LEU	E	26	77.834	30.338	15.383	1.00	21.37	E
ATOM	4605	CG	LEU	E	26	79.054	29.778	16.128	1.00	22.89	E
ATOM	4606	CD1	LEU	E	26	78.723	29.567	17.602	1.00	25.16	E
ATOM	4607	CD2	LEU	E	26	79.483	28.466	15.493	1.00	23.51	E
ATOM	4608	C	LEU	E	26	79.032	30.552	13.193	1.00	21.17	E
ATOM	4609	O	LEU	E	26	78.637	29.674	12.432	1.00	21.77	E
ATOM	4610	N	VAL	E	27	80.285	30.983	13.201	1.00	19.92	E
ATOM	4611	CA	VAL	E	27	81.278	30.358	12.345	1.00	21.31	E
ATOM	4612	CB	VAL	E	27	81.530	31.166	11.039	1.00	20.44	E
ATOM	4613	CG1	VAL	E	27	82.524	30.420	10.156	1.00	21.63	E
ATOM	4614	CG2	VAL	E	27	80.221	31.366	10.275	1.00	20.48	E
ATOM	4615	C	VAL	E	27	82.581	30.231	13.112	1.00	21.74	E
ATOM	4616	O	VAL	E	27	83.189	31.228	13.487	1.00	24.11	E
ATOM	4617	N	SER	E	28	82.994	29.001	13.383	1.00	20.88	E
ATOM	4618	CA	SER	E	28	84.249	28.799	14.084	1.00	21.53	E
ATOM	4619	CB	SER	E	28	84.113	27.702	15.152	1.00	20.62	E
ATOM	4620	OG	SER	E	28	83.693	26.475	14.598	1.00	29.22	E
ATOM	4621	C	SER	E	28	85.274	28.433	13.006	1.00	21.41	E
ATOM	4622	O	SER	E	28	84.992	27.631	12.105	1.00	19.11	E
ATOM	4623	N	ARG	E	29	86.450	29.051	13.090	1.00	18.23	E
ATOM	4624	CA	ARG	E	29	87.496	28.838	12.105	1.00	18.45	E
ATOM	4625	CB	ARG	E	29	87.701	30.124	11.287	1.00	16.91	E
ATOM	4626	CG	ARG	E	29	86.433	30.817	10.810	1.00	17.70	E
ATOM	4627	CD	ARG	E	29	86.791	32.117	10.109	1.00	18.98	E
ATOM	4628	NE	ARG	E	29	85.631	32.902	9.705	1.00	20.82	E
ATOM	4629	CZ	ARG	E	29	84.939	32.704	8.586	1.00	22.76	E
ATOM	4630	NH1	ARG	E	29	85.285	31.739	7.743	1.00	21.05	E
ATOM	4631	NH2	ARG	E	29	83.904	33.482	8.309	1.00	20.13	E
ATOM	4632	C	ARG	E	29	88.842	28.435	12.710	1.00	18.44	E
ATOM	4633	O	ARG	E	29	89.401	29.171	13.520	1.00	19.35	E
ATOM	4634	N	SER	E	30	89.351	27.269	12.315	1.00	18.98	E
ATOM	4635	CA	SER	E	30	90.657	26.788	12.774	1.00	21.70	E
ATOM	4636	CB	SER	E	30	90.619	25.284	13.028	1.00	22.10	E
ATOM	4637	OG	SER	E	30	89.718	24.969	14.072	1.00	27.24	E
ATOM	4638	C	SER	E	30	91.637	27.119	11.639	1.00	23.03	E
ATOM	4639	O	SER	E	30	91.509	26.604	10.528	1.00	23.56	E
ATOM	4640	N	ILE	E	31	92.611	27.978	11.927	1.00	23.05	E
ATOM	4641	CA	ILE	E	31	93.560	28.439	10.923	1.00	22.24	E
ATOM	4642	CB	ILE	E	31	93.563	29.997	10.856	1.00	22.84	E
ATOM	4643	CG2	ILE	E	31	94.163	30.470	9.545	1.00	19.19	E
ATOM	4644	CG1	ILE	E	31	92.143	30.546	11.043	1.00	24.76	E
ATOM	4645	CD1	ILE	E	31	91.144	30.032	10.047	1.00	29.25	E
ATOM	4646	C	ILE	E	31	95.013	28.014	11.134	1.00	24.53	E
ATOM	4647	O	ILE	E	31	95.566	28.187	12.225	1.00	22.94	E
ATOM	4648	N	TYR	E	32	95.625	27.468	10.081	1.00	24.41	E
ATOM	4649	CA	TYR	E	32	97.030	27.089	10.120	1.00	24.27	E
ATOM	4650	CB	TYR	E	32	97.277	25.755	9.417	1.00	26.61	E
ATOM	4651	CG	TYR	E	32	98.733	25.338	9.444	1.00	29.24	E
ATOM	4652	CD1	TYR	E	32	99.423	25.231	10.649	1.00	30.69	E
ATOM	4653	CE1	TYR	E	32	100.770	24.880	10.683	1.00	32.83	E
ATOM	4654	CD2	TYR	E	32	99.426	25.078	8.267	1.00	31.46	E
ATOM	4655	CE2	TYR	E	32	100.774	24.721	8.288	1.00	32.58	E
ATOM	4656	CZ	TYR	E	32	101.438	24.625	9.497	1.00	32.80	E
ATOM	4657	OH	TYR	E	32	102.768	24.280	9.522	1.00	33.44	E

ATOM	4658	C	TYR	E	32	97.700	28.225	9.353	1.00	24.83	E
ATOM	4659	O	TYR	E	32	97.444	28.415	8.164	1.00	25.49	E
ATOM	4660	N	ASN	E	33	98.543	28.985	10.045	1.00	24.28	E
ATOM	4661	CA	ASN	E	33	99.202	30.146	9.461	1.00	24.25	E
ATOM	4662	CB	ASN	E	33	100.144	29.740	8.324	1.00	23.93	E
ATOM	4663	CG	ASN	E	33	101.379	29.014	8.834	1.00	25.26	E
ATOM	4664	OD1	ASN	E	33	102.003	29.439	9.808	1.00	26.40	E
ATOM	4665	ND2	ASN	E	33	101.737	27.918	8.181	1.00	25.47	E
ATOM	4666	C	ASN	E	33	98.114	31.099	8.980	1.00	24.88	E
ATOM	4667	O	ASN	E	33	97.494	31.780	9.799	1.00	25.88	E
ATOM	4668	N	ARG	E	34	97.864	31.163	7.677	1.00	24.52	E
ATOM	4669	CA	ARG	E	34	96.815	32.055	7.194	1.00	26.32	E
ATOM	4670	CB	ARG	E	34	97.385	33.175	6.317	1.00	26.61	E
ATOM	4671	CG	ARG	E	34	97.999	34.346	7.072	1.00	26.37	E
ATOM	4672	CD	ARG	E	34	97.776	35.646	6.304	1.00	28.18	E
ATOM	4673	NE	ARG	E	34	97.886	35.429	4.865	1.00	31.86	E
ATOM	4674	CZ	ARG	E	34	97.607	36.332	3.931	1.00	33.42	E
ATOM	4675	NH1	ARG	E	34	97.197	37.550	4.265	1.00	35.40	E
ATOM	4676	NH2	ARG	E	34	97.722	36.003	2.653	1.00	35.29	E
ATOM	4677	C	ARG	E	34	95.728	31.333	6.417	1.00	26.98	E
ATOM	4678	O	ARG	E	34	94.896	31.968	5.763	1.00	28.88	E
ATOM	4679	N	GLU	E	35	95.719	30.010	6.481	1.00	26.13	E
ATOM	4680	CA	GLU	E	35	94.698	29.279	5.759	1.00	27.02	E
ATOM	4681	CB	GLU	E	35	95.350	28.359	4.720	1.00	31.96	E
ATOM	4682	CG	GLU	E	35	96.284	27.301	5.278	1.00	38.52	E
ATOM	4683	CD	GLU	E	35	97.116	26.633	4.192	1.00	42.24	E
ATOM	4684	OE1	GLU	E	35	98.180	27.187	3.832	1.00	44.86	E
ATOM	4685	OE2	GLU	E	35	96.699	25.565	3.690	1.00	43.70	E
ATOM	4686	C	GLU	E	35	93.754	28.498	6.671	1.00	25.31	E
ATOM	4687	O	GLU	E	35	94.175	27.709	7.522	1.00	22.18	E
ATOM	4688	N	GLU	E	36	92.464	28.756	6.498	1.00	24.46	E
ATOM	4689	CA	GLU	E	36	91.438	28.085	7.272	1.00	24.13	E
ATOM	4690	CB	GLU	E	36	90.085	28.731	7.001	1.00	24.37	E
ATOM	4691	CG	GLU	E	36	88.975	28.295	7.928	1.00	25.26	E
ATOM	4692	CD	GLU	E	36	87.669	28.991	7.604	1.00	26.01	E
ATOM	4693	OE1	GLU	E	36	87.672	29.847	6.694	1.00	27.25	E
ATOM	4694	OE2	GLU	E	36	86.646	28.689	8.253	1.00	27.12	E
ATOM	4695	C	GLU	E	36	91.413	26.630	6.826	1.00	23.40	E
ATOM	4696	O	GLU	E	36	91.252	26.347	5.645	1.00	23.72	E
ATOM	4697	N	ILE	E	37	91.576	25.707	7.767	1.00	23.97	E
ATOM	4698	CA	ILE	E	37	91.579	24.294	7.419	1.00	24.33	E
ATOM	4699	CB	ILE	E	37	92.818	23.578	8.019	1.00	24.98	E
ATOM	4700	CG2	ILE	E	37	94.096	24.255	7.532	1.00	24.26	E
ATOM	4701	CG1	ILE	E	37	92.771	23.616	9.544	1.00	25.10	E
ATOM	4702	CD1	ILE	E	37	93.822	22.742	10.204	1.00	26.49	E
ATOM	4703	C	ILE	E	37	90.301	23.555	7.836	1.00	23.49	E
ATOM	4704	O	ILE	E	37	89.871	22.627	7.162	1.00	23.62	E
ATOM	4705	N	VAL	E	38	89.690	23.975	8.936	1.00	25.16	E
ATOM	4706	CA	VAL	E	38	88.465	23.342	9.415	1.00	25.85	E
ATOM	4707	CB	VAL	E	38	88.715	22.489	10.667	1.00	26.44	E
ATOM	4708	CG1	VAL	E	38	87.516	21.610	10.932	1.00	27.10	E
ATOM	4709	CG2	VAL	E	38	89.980	21.671	10.495	1.00	29.59	E
ATOM	4710	C	VAL	E	38	87.481	24.428	9.792	1.00	24.45	E
ATOM	4711	O	VAL	E	38	87.885	25.471	10.288	1.00	24.36	E
ATOM	4712	N	ARG	E	39	86.193	24.168	9.594	1.00	24.90	E
ATOM	4713	CA	ARG	E	39	85.175	25.161	9.904	1.00	23.66	E
ATOM	4714	CB	ARG	E	39	84.975	26.055	8.678	1.00	25.55	E
ATOM	4715	CG	ARG	E	39	83.956	27.174	8.857	1.00	29.11	E
ATOM	4716	CD	ARG	E	39	83.514	27.755	7.515	1.00	29.37	E
ATOM	4717	NE	ARG	E	39	84.626	28.289	6.739	1.00	29.70	E
ATOM	4718	CZ	ARG	E	39	84.505	28.798	5.516	1.00	31.37	E
ATOM	4719	NH1	ARG	E	39	83.314	28.842	4.930	1.00	33.54	E
ATOM	4720	NH2	ARG	E	39	85.572	29.266	4.879	1.00	27.78	E
ATOM	4721	C	ARG	E	39	83.813	24.594	10.328	1.00	23.51	E
ATOM	4722	O	ARG	E	39	83.385	23.539	9.853	1.00	23.83	E
ATOM	4723	N	PHE	E	40	83.147	25.295	11.242	1.00	22.04	E
ATOM	4724	CA	PHE	E	40	81.799	24.918	11.655	1.00	21.92	E
ATOM	4725	CB	PHE	E	40	81.682	24.551	13.137	1.00	21.36	E
ATOM	4726	CG	PHE	E	40	80.296	24.088	13.514	1.00	17.04	E
ATOM	4727	CD1	PHE	E	40	79.944	22.748	13.407	1.00	19.76	E
ATOM	4728	CD2	PHE	E	40	79.315	25.004	13.875	1.00	16.82	E
ATOM	4729	CE1	PHE	E	40	78.628	22.324	13.649	1.00	17.84	E
ATOM	4730	CE2	PHE	E	40	78.001	24.594	14.119	1.00	18.10	E
ATOM	4731	CZ	PHE	E	40	77.661	23.248	14.003	1.00	16.61	E

ATOM	4732	C	PHE	E	40	80.938	26.148	11.395	1.00	21.77	E
ATOM	4733	O	PHE	E	40	81.064	27.167	12.071	1.00	20.81	E
ATOM	4734	N	ASP	E	41	80.067	26.033	10.404	1.00	21.82	E
ATOM	4735	CA	ASP	E	41	79.181	27.110	9.995	1.00	21.76	E
ATOM	4736	CB	ASP	E	41	79.190	27.182	8.470	1.00	22.62	E
ATOM	4737	CG	ASP	E	41	78.492	28.400	7.929	1.00	23.09	E
ATOM	4738	OD1	ASP	E	41	77.507	28.864	8.546	1.00	22.57	E
ATOM	4739	OD2	ASP	E	41	78.929	28.881	6.861	1.00	25.40	E
ATOM	4740	C	ASP	E	41	77.801	26.713	10.493	1.00	21.43	E
ATOM	4741	O	ASP	E	41	77.277	25.672	10.085	1.00	22.83	E
ATOM	4742	N	SER	E	42	77.210	27.520	11.369	1.00	19.04	E
ATOM	4743	CA	SER	E	42	75.896	27.173	11.895	1.00	20.39	E
ATOM	4744	CB	SER	E	42	75.399	28.220	12.907	1.00	19.13	E
ATOM	4745	OG	SER	E	42	75.271	29.505	12.323	1.00	24.30	E
ATOM	4746	C	SER	E	42	74.891	27.000	10.762	1.00	20.23	E
ATOM	4747	O	SER	E	42	73.916	26.267	10.910	1.00	18.97	E
ATOM	4748	N	ASP	E	43	75.145	27.660	9.631	1.00	21.77	E
ATOM	4749	CA	ASP	E	43	74.261	27.556	8.470	1.00	24.99	E
ATOM	4750	CB	ASP	E	43	74.561	28.651	7.439	1.00	26.10	E
ATOM	4751	CG	ASP	E	43	73.819	29.947	7.727	1.00	28.71	E
ATOM	4752	OD1	ASP	E	43	73.078	30.013	8.737	1.00	28.83	E
ATOM	4753	OD2	ASP	E	43	73.976	30.902	6.939	1.00	31.35	E
ATOM	4754	C	ASP	E	43	74.378	26.193	7.809	1.00	25.68	E
ATOM	4755	O	ASP	E	43	73.424	25.727	7.190	1.00	28.27	E
ATOM	4756	N	VAL	E	44	75.544	25.558	7.937	1.00	25.47	E
ATOM	4757	CA	VAL	E	44	75.764	24.229	7.362	1.00	23.51	E
ATOM	4758	CB	VAL	E	44	77.251	24.007	6.964	1.00	24.39	E
ATOM	4759	CG1	VAL	E	44	77.456	22.579	6.491	1.00	19.52	E
ATOM	4760	CG2	VAL	E	44	77.655	24.984	5.867	1.00	23.79	E
ATOM	4761	C	VAL	E	44	75.356	23.154	8.373	1.00	23.25	E
ATOM	4762	O	VAL	E	44	74.774	22.136	8.005	1.00	22.01	E
ATOM	4763	N	GLY	E	45	75.683	23.370	9.644	1.00	22.52	E
ATOM	4764	CA	GLY	E	45	75.292	22.411	10.664	1.00	21.82	E
ATOM	4765	C	GLY	E	45	76.275	21.311	11.001	1.00	22.07	E
ATOM	4766	O	GLY	E	45	75.982	20.442	11.818	1.00	22.49	E
ATOM	4767	N	GLU	E	46	77.439	21.317	10.373	1.00	22.18	E
ATOM	4768	CA	GLU	E	46	78.421	20.295	10.691	1.00	23.77	E
ATOM	4769	CB	GLU	E	46	78.147	19.017	9.891	1.00	26.29	E
ATOM	4770	CG	GLU	E	46	78.455	19.112	8.411	1.00	28.23	E
ATOM	4771	CD	GLU	E	46	78.214	17.795	7.677	1.00	32.67	E
ATOM	4772	OE1	GLU	E	46	78.575	17.706	6.482	1.00	33.19	E
ATOM	4773	OE2	GLU	E	46	77.661	16.855	8.290	1.00	33.19	E
ATOM	4774	C	GLU	E	46	79.807	20.839	10.383	1.00	23.15	E
ATOM	4775	O	GLU	E	46	79.943	21.880	9.747	1.00	23.06	E
ATOM	4776	N	PHE	E	47	80.835	20.153	10.857	1.00	21.79	E
ATOM	4777	CA	PHE	E	47	82.192	20.595	10.599	1.00	22.22	E
ATOM	4778	CB	PHE	E	47	83.175	19.864	11.515	1.00	22.30	E
ATOM	4779	CG	PHE	E	47	83.058	20.249	12.968	1.00	22.20	E
ATOM	4780	CD1	PHE	E	47	83.867	21.246	13.508	1.00	19.80	E
ATOM	4781	CD2	PHE	E	47	82.151	19.598	13.802	1.00	23.06	E
ATOM	4782	CE1	PHE	E	47	83.781	21.585	14.858	1.00	18.93	E
ATOM	4783	CE2	PHE	E	47	82.055	19.931	15.157	1.00	22.63	E
ATOM	4784	CZ	PHE	E	47	82.872	20.925	15.684	1.00	20.81	E
ATOM	4785	C	PHE	E	47	82.513	20.278	9.147	1.00	24.14	E
ATOM	4786	O	PHE	E	47	82.064	19.258	8.609	1.00	23.25	E
ATOM	4787	N	ARG	E	48	83.272	21.164	8.511	1.00	22.66	E
ATOM	4788	CA	ARG	E	48	83.672	20.966	7.131	1.00	23.86	E
ATOM	4789	CB	ARG	E	48	82.801	21.795	6.181	1.00	23.48	E
ATOM	4790	CG	ARG	E	48	81.339	21.375	6.091	1.00	25.01	E
ATOM	4791	CD	ARG	E	48	81.155	20.061	5.348	1.00	25.08	E
ATOM	4792	NE	ARG	E	48	79.747	19.811	5.044	1.00	27.17	E
ATOM	4793	CZ	ARG	E	48	79.038	20.515	4.164	1.00	29.38	E
ATOM	4794	NH1	ARG	E	48	79.604	21.513	3.498	1.00	31.36	E
ATOM	4795	NH2	ARG	E	48	77.763	20.226	3.946	1.00	30.50	E
ATOM	4796	C	ARG	E	48	85.119	21.395	6.972	1.00	24.13	E
ATOM	4797	O	ARG	E	48	85.507	22.480	7.416	1.00	25.58	E
ATOM	4798	N	ALA	E	49	85.924	20.537	6.360	1.00	22.26	E
ATOM	4799	CA	ALA	E	49	87.316	20.875	6.122	1.00	23.11	E
ATOM	4800	CB	ALA	E	49	88.102	19.630	5.711	1.00	22.46	E
ATOM	4801	C	ALA	E	49	87.290	21.875	4.980	1.00	22.04	E
ATOM	4802	O	ALA	E	49	86.507	21.722	4.048	1.00	23.16	E
ATOM	4803	N	VAL	E	50	88.108	22.916	5.050	1.00	23.56	E
ATOM	4804	CA	VAL	E	50	88.135	23.875	3.953	1.00	23.79	E
ATOM	4805	CB	VAL	E	50	88.059	25.360	4.478	1.00	24.14	E

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ATOM	4806	CG1	VAL	E	50	88.341	25.408	5.959	1.00	24.71	E
ATOM	4807	CG2	VAL	E	50	89.010	26.268	3.704	1.00	22.47	E
ATOM	4808	C	VAL	E	50	89.374	23.578	3.098	1.00	23.50	E
ATOM	4809	O	VAL	E	50	89.485	24.041	1.963	1.00	24.92	E
ATOM	4810	N	THR	E	51	90.281	22.770	3.650	1.00	24.49	E
ATOM	4811	CA	THR	E	51	91.492	22.317	2.951	1.00	25.50	E
ATOM	4812	CB	THR	E	51	92.742	23.198	3.234	1.00	25.69	E
ATOM	4813	OG1	THR	E	51	93.171	23.007	4.586	1.00	27.89	E
ATOM	4814	CG2	THR	E	51	92.443	24.670	2.985	1.00	23.29	E
ATOM	4815	C	THR	E	51	91.817	20.895	3.420	1.00	26.59	E
ATOM	4816	O	THR	E	51	91.387	20.477	4.496	1.00	27.35	E
ATOM	4817	N	LEU	E	52	92.576	20.154	2.617	1.00	28.03	E
ATOM	4818	CA	LEU	E	52	92.949	18.783	2.956	1.00	28.49	E
ATOM	4819	CB	LEU	E	52	93.995	18.259	1.969	1.00	30.33	E
ATOM	4820	CG	LEU	E	52	93.536	17.892	0.556	1.00	34.17	E
ATOM	4821	CD1	LEU	E	52	94.749	17.628	-0.334	1.00	34.41	E
ATOM	4822	CD2	LEU	E	52	92.644	16.668	0.620	1.00	34.30	E
ATOM	4823	C	LEU	E	52	93.494	18.645	4.374	1.00	28.20	E
ATOM	4824	O	LEU	E	52	93.304	17.624	5.027	1.00	29.17	E
ATOM	4825	N	LEU	E	53	94.179	19.677	4.839	1.00	28.30	E
ATOM	4826	CA	LEU	E	53	94.766	19.682	6.171	1.00	28.75	E
ATOM	4827	CB	LEU	E	53	95.490	21.015	6.387	1.00	30.37	E
ATOM	4828	CG	LEU	E	53	96.939	21.010	6.882	1.00	32.74	E
ATOM	4829	CD1	LEU	E	53	97.777	20.085	6.008	1.00	31.60	E
ATOM	4830	CD2	LEU	E	53	97.498	22.444	6.854	1.00	30.06	E
ATOM	4831	C	LEU	E	53	93.727	19.464	7.278	1.00	27.82	E
ATOM	4832	O	LEU	E	53	94.027	18.858	8.312	1.00	25.47	E
ATOM	4833	N	GLY	E	54	92.508	19.957	7.059	1.00	27.39	E
ATOM	4834	CA	GLY	E	54	91.466	19.813	8.062	1.00	26.92	E
ATOM	4835	C	GLY	E	54	90.569	18.589	7.949	1.00	28.33	E
ATOM	4836	O	GLY	E	54	89.725	18.348	8.813	1.00	28.02	E
ATOM	4837	N	LEU	E	55	90.755	17.801	6.898	1.00	29.28	E
ATOM	4838	CA	LEU	E	55	89.930	16.620	6.675	1.00	31.43	E
ATOM	4839	CB	LEU	E	55	90.410	15.885	5.419	1.00	32.39	E
ATOM	4840	CG	LEU	E	55	89.426	14.934	4.731	1.00	35.68	E
ATOM	4841	CD1	LEU	E	55	88.086	15.627	4.504	1.00	34.41	E
ATOM	4842	CD2	LEU	E	55	90.018	14.473	3.406	1.00	35.99	E
ATOM	4843	C	LEU	E	55	89.865	15.659	7.867	1.00	32.09	E
ATOM	4844	O	LEU	E	55	88.778	15.294	8.312	1.00	32.58	E
ATOM	4845	N	PRO	E	56	91.023	15.235	8.402	1.00	31.67	E
ATOM	4846	CD	PRO	E	56	92.411	15.520	8.000	1.00	31.37	E
ATOM	4847	CA	PRO	E	56	90.986	14.316	9.546	1.00	31.17	E
ATOM	4848	CB	PRO	E	56	92.459	14.163	9.919	1.00	30.50	E
ATOM	4849	CG	PRO	E	56	93.161	14.352	8.611	1.00	31.19	E
ATOM	4850	C	PRO	E	56	90.158	14.865	10.708	1.00	31.43	E
ATOM	4851	O	PRO	E	56	89.250	14.195	11.205	1.00	32.17	E
ATOM	4852	N	ALA	E	57	90.473	16.086	11.138	1.00	29.94	E
ATOM	4853	CA	ALA	E	57	89.748	16.709	12.244	1.00	28.45	E
ATOM	4854	CB	ALA	E	57	90.314	18.098	12.532	1.00	27.09	E
ATOM	4855	C	ALA	E	57	88.249	16.807	11.960	1.00	27.57	E
ATOM	4856	O	ALA	E	57	87.436	16.466	12.812	1.00	26.57	E
ATOM	4857	N	ALA	E	58	87.899	17.270	10.761	1.00	27.40	E
ATOM	4858	CA	ALA	E	58	86.505	17.422	10.349	1.00	28.85	E
ATOM	4859	CB	ALA	E	58	86.439	18.007	8.939	1.00	27.80	E
ATOM	4860	C	ALA	E	58	85.726	16.110	10.406	1.00	30.37	E
ATOM	4861	O	ALA	E	58	84.624	16.058	10.954	1.00	29.58	E
ATOM	4862	N	GLU	E	59	86.292	15.052	9.837	1.00	32.24	E
ATOM	4863	CA	GLU	E	59	85.632	13.750	9.845	1.00	35.22	E
ATOM	4864	CB	GLU	E	59	86.441	12.724	9.049	1.00	36.81	E
ATOM	4865	CG	GLU	E	59	86.392	12.917	7.549	1.00	40.89	. E
ATOM	4866	CD	GLU	E	59	87.057	11.775	6.805	1.00	44.28	E
ATOM	4867	OE1	GLU	E	59	88.291	11.597	6.955	1.00	45.76	E
ATOM	4868	OE2	GLU	E	59	86.342	11.052	6.075	1.00	45.12	E
ATOM	4869	C	GLU	E	59	85.441	13.231	11.260	1.00	34.08	E
ATOM	4870	O	GLU	E	59	84.384	12.697	11.596	1.00	34.48	E
ATOM	4871	N	TYR	E	60	86.466	13.387	12.090	1.00	33.21	E
ATOM	4872	CA	TYR	E	60	86.390	12.919	13.463	1.00	32.36	E
ATOM	4873	CB	TYR	E	60	87.724	13.101	14.177	1.00	33.78	E
ATOM	4874	CG	TYR	E	60	87.657	12.617	15.594	1.00	35.68	E
ATOM	4875	CD1	TYR	E	60	87.543	11.259	15.872	1.00	37.48	E
ATOM	4876	CE1	TYR	E	60	87.394	10.802	17.173	1.00	41.14	E
ATOM	4877	CD2	TYR	E	60	87.628	13.514	16.655	1.00	37.26	E
ATOM	4878	CE2	TYR	E	60	87.478	13.073	17.965	1.00	40.26	E
ATOM	4879	CZ	TYR	E	60	87.360	11.714	18.218	1.00	41.88	E

ATOM	4880	OH	TYR	E	60	87.198	11.262	19.508	1.00	44.51	E
ATOM	4881	C	TYR	E	60	85.312	13.623	14.275	1.00	32.30	E
ATOM	4882	O	TYR	E	60	84.430	12.976	14.839	1.00	30.56	E
ATOM	4883	N	TRP	E	61	85.391	14.950	14.347	1.00	31.42	E
ATOM	4884	CA	TRP	E	61	84.412	15.715	15.112	1.00	31.35	E
ATOM	4885	CB	TRP	E	61	84.744	17.219	15.071	1.00	32.78	E
ATOM	4886	CG	TRP	E	61	86.051	17.584	15.748	1.00	35.14	E
ATOM	4887	CD2	TRP	E	61	86.909	18.687	15.425	1.00	37.07	E
ATOM	4888	CE2	TRP	E	61	87.994	18.655	16.331	1.00	37.15	E
ATOM	4889	CE3	TRP	E	61	86.864	19.706	14.458	1.00	39.50	E
ATOM	4890	CD1	TRP	E	61	86.635	16.947	16.809	1.00	35.82	E
ATOM	4891	NE1	TRP	E	61	87.800	17.582	17.163	1.00	35.66	E
ATOM	4892	CZ2	TRP	E	61	89.034	19.602	16.300	1.00	38.95	E
ATOM	4893	CZ3	TRP	E	61	87.902	20.656	14.427	1.00	41.16	E
ATOM	4894	CH2	TRP	E	61	88.971	20.591	15.346	1.00	40.81	E
ATOM	4895	C	TRP	E	61	82.968	15.472	14.653	1.00	29.29	E
ATOM	4896	O	TRP	E	61	82.045	15.563	15.458	1.00	29.20	E
ATOM	4897	N	ASN	E	62	82.772	15.162	13.373	1.00	27.86	E
ATOM	4898	CA	ASN	E	62	81.428	14.902	12.853	1.00	29.09	E
ATOM	4899	CB	ASN	E	62	81.379	15.051	11.331	1.00	29.42	E
ATOM	4900	CG	ASN	E	62	81.241	16.492	10.893	1.00	31.22	E
ATOM	4901	OD1	ASN	E	62	80.563	17.288	11.545	1.00	29.56	E
ATOM	4902	ND2	ASN	E	62	81.870	16.834	9.772	1.00	31.73	E
ATOM	4903	C	ASN	E	62	80.906	13.519	13.220	1.00	28.26	E
ATOM	4904	O	ASN	E	62	79.716	13.242	13.086	1.00	27.48	E
ATOM	4905	N	SER	E	63	81.795	12.647	13.672	1.00	27.47	E
ATOM	4906	CA	SER	E	63	81.381	11.311	14.056	1.00	29.39	E
ATOM	4907	CB	SER	E	63	82.511	10.310	13.803	1.00	28.56	E
ATOM	4908	OG	SER	E	63	83.607	10.545	14.671	1.00	32.72	E
ATOM	4909	C	SER	E	63	80.987	11.310	15.534	1.00	30.11	E
ATOM	4910	O	SER	E	63	80.515	10.297	16.055	1.00	31.52	E
ATOM	4911	N	GLN	E	64	81.173	12.453	16.196	1.00	28.86	E
ATOM	4912	CA	GLN	E	64	80.834	12.604	17.612	1.00	28.28	E
ATOM	4913	CB	GLN	E	64	81.929	13.379	18.350	1.00	29.50	E
ATOM	4914	CG	GLN	E	64	83.330	12.787	18.266	1.00	29.72	E
ATOM	4915	CD	GLN	E	64	83.418	11.412	18.888	1.00	32.69	E
ATOM	4916	OE1	GLN	E	64	83.055	10.405	18.267	1.00	35.22	E
ATOM	4917	NE2	GLN	E	64	83.887	11.358	20.128	1.00	31.92	E
ATOM	4918	C	GLN	E	64	79.522	13.366	17.783	1.00	28.42	E
ATOM	4919	O	GLN	E	64	79.525	14.599	17.800	1.00	27.68	E
ATOM	4920	N	LYS	E	65	78.410	12.648	17.926	1.00	27.17	E
ATOM	4921	CA	LYS	E	65	77.111	13.300	18.097	1.00	29.82	E
ATOM	4922	CB	LYS	E	65	75.994	12.258	18.253	1.00	31.43	E
ATOM	4923	CG	LYS	E	65	75.479	11.692	16.936	1.00	37.61	E
ATOM	4924	CD	LYS	E	65	74.801	12.766	16.072	1.00	41.12	E
ATOM	4925	CE	LYS	E	65	73.489	13.267	16.696	1.00	44.25	E
ATOM	4926	NZ	LYS	E	65	72.832	14.322	15.861	1.00	44.10	E
ATOM	4927	C	LYS	E	65	77.067	14.273	19.278	1.00	28.07	E
ATOM	4928	O	LYS	E	65	76.406	15.308	19.211	1.00	27.46	E
ATOM	4929	N	ASP	E	66	77.758	13.938	20.361	1.00	27.40	E
ATOM	4930	CA	ASP	E	66	77.783	14.809	21.532	1.00	26.85	E
ATOM	4931	CB	ASP	E	66	78.566	14.142	22.670	1.00	26.10	E
ATOM	4932	CG	ASP	E	66	79.899	13.576	22.212	1.00	29.25	E
ATOM	4933	OD1	ASP	E	66	79.915	12.836	21.205	1.00	28.95	E
ATOM	4934	OD2	ASP	E	66	80.929	13.858	22.864	1.00	31.03	E
ATOM	4935	C	ASP	E	66	78.390	16.174	21.193	1.00	26.21	E
ATOM	4936	O	ASP	E	66	77.844	17.215	21.559	1.00	26.58	E
ATOM	4937	N	ILE	E	67	79.510	16.170	20.478	1.00	26.25	E
ATOM	4938	CA	ILE	E	67	80.164	17.414	20.100	1.00	25.76	E
ATOM	4939	CB	ILE	E	67	81.551	17.153	19.477	1.00	27.31	E
ATOM	4940	CG2	ILE	E	67	82.261	18.467	19.210	1.00	25.90	E
ATOM	4941	CG1	ILE	E	67	82.396	16.304	20.429	1.00	28.85	E
ATOM	4942	CD1	ILE	E	67	82.494	16.871	21.844	1.00	32.35	E
ATOM	4943	C	ILE	E	67	79.307	18.189	19.108	1.00	25.95	E
ATOM	4944	O	ILE	E	67	79.125	19.392	19.255	1.00	26.97	E
ATOM	4945	N	LEU	E	68	78.775	17.504	18.100	1.00	26.05	E
ATOM	4946	CA	LEU	E	68	77.927	18.172	17.113	1.00	26.36	E
ATOM	4947	CB	LEU	E	68	77.382	17.169	16.094	1.00	26.91	E
ATOM	4948	CG	LEU	E	68	78.154	16.987	14.790	1.00	27.01	E
ATOM	4949	CD1	LEU	E	68	77.389	16.002	13.913	1.00	26.26	E
ATOM	4950	CD2	LEU	E	68	78.311	18.342	14.076	1.00	24.04	E
ATOM	4951	C	LEU	E	68	76.760	18.870	17.792	1.00	26.03	E
ATOM	4952	O	LEU	E	68	76.433	20.011	17.465	1.00	25.76	E
ATOM	4953	N	GLU	E	69	76.134	18.175	18.737	1.00	27.50	E

ATOM	4954	CA	GLU	E	69	75.000	18.726	19.471	1.00	30.38	E
ATOM	4955	CB	GLU	E	69	74.481	17.720	20.508	1.00	34.06	E
ATOM	4956	CG	GLU	E	69	73.426	16.742	19.989	1.00	40.55	E
ATOM	4957	CD	GLU	E	69	72.211	17.444	19.392	1.00	44.43	E
ATOM	4958	OE1	GLU	E	69	71.802	18.505	19.922	1.00	43.73	E
ATOM	4959	OE2	GLU	E	69	71.656	16.926	18.397	1.00	48.15	E
ATOM	4960	C	GLU	E	69	75.335	20.034	20.178	1.00	29.17	E
ATOM	4961	O	GLU	E	69	74.587	21.009	20.071	1.00	29.71	E
ATOM	4962	N	ARG	E	70	76.453	20.059	20.899	1.00	26.65	E
ATOM	4963	CA	ARG	E	70	76.844	21.262	21.620	1.00	25.51	E
ATOM	4964	CB	ARG	E	70	78.001	20.965	22.572	1.00	27.14	E
ATOM	4965	CG	ARG	E	70	77.711	19.855	23.563	1.00	31.22	E
ATOM	4966	CD	ARG	E	70	78.637	19.934	24.769	1.00	35.11	E
ATOM	4967	NE	ARG	E	70	78.758	18.647	25.440	1.00	39.19	E
ATOM	4968	CZ	ARG	E	70	79.456	17.628	24.956	1.00	41.08	E
ATOM	4969	NH1	ARG	E	70	80.096	17.752	23.802	1.00	45.32	E
ATOM	4970	NH2	ARG	E	70	79.511	16.486	25.618	1.00	44.01	E
ATOM	4971	C	ARG	E	70	77.230	22.395	20.677	1.00	24.57	E
ATOM	4972	O	ARG	E	70	76.927	23.557	20.941	1.00	21.44	E
ATOM	4973	N	LYS	E	71	77.897	22.057	19.576	1.00	24.56	E
ATOM	4974	CA	LYS	E	71	78.309	23.071	18.612	1.00	24.08	E
ATOM	4975	CB	LYS	E	71	79.202	22.452	17.534	1.00	25.39	E
ATOM	4976	CG	LYS	E	71	80.100	23.474	16.852	1.00	29.73	E
ATOM	4977	CD	LYS	E	71	81.067	24.095	17.862	1.00	30.94	E
ATOM	4978	CE	LYS	E	71	81.905	25.205	17.256	1.00	31.82	E
ATOM	4979	NZ	LYS	E	71	82.774	25.849	18.290	1.00	33.45	E
ATOM	4980	C	LYS	E	71	77.087	23.732	17.960	1.00	22.42	E
ATOM	4981	O	LYS	E	71	77.045	24.951	17.780	1.00	18.65	E
ATOM	4982	N	ARG	E	72	76.092	22.919	17.620	1.00	22.31	E
ATOM	4983	CA	ARG	E	72	74.867	23.419	17.002	1.00	21.44	E
ATOM	4984	CB	ARG	E	72	73.984	22.250	16.578	1.00	19.93	E
ATOM	4985	CG	ARG	E	72	74.534	21.497	15.407	1.00	21.45	E
ATOM	4986	CD	ARG	E	72	73.779	20.223	15.141	1.00	23.34	E
ATOM	4987	NE	ARG	E	72	74.211	19.643	13.877	1.00	24.99	E
ATOM	4988	CZ	ARG	E	72	74.028	18.377	13.522	1.00	27.42	E
ATOM	4989	NH1	ARG	E	72	73.411	17.533	14.344	1.00	25.90	E
ATOM	4990	NH2	ARG	E	72	74.475	17.955	12.341	1.00	25.41	E
ATOM	4991	C	ARG	E	72	74.093	24.315	17.961	1.00	21.34	E
ATOM	4992	O	ARG	E	72	73.336	25.182	17.535	1.00	23.67	E
ATOM	4993	N	ALA	E	73	74.293	24.105	19.256	1.00	21.13	E
ATOM	4994	CA	ALA	E	73	73.610	24.887	20.281	1.00	22.11	E
ATOM	4995	CB	ALA	E	73	73.476	24.052	21.568	1.00	21.20	E
ATOM	4996	C	ALA	E	73	74.347	26.189	20.576	1.00	22.67	E
ATOM	4997	O	ALA	E	73	73.773	27.133	21.125	1.00	25.58	E
ATOM	4998	N	ALA	E	74	75.614	26.248	20.195	1.00	22.52	E
ATOM	4999	CA	ALA	E	74	76.420	27.432	20.448	1.00	22.20	E
ATOM	5000	CB	ALA	E	74	77.830	27.219	19.910	1.00	24.81	E
ATOM	5001	C	ALA	E	74	75.828	28.722	19.882	1.00	22.28	E
ATOM	5002	O	ALA	E	74	76.027	29.796	20.452	1.00	20.24	E
ATOM	5003	N	VAL	E	75	75.102	28.634	18.770	1.00	21.92	E
ATOM	5004	CA	VAL	E	75	74.519	29.841	18.185	1.00	21.69	E
ATOM	5005	CB	VAL	E	75	73.700	29.517	16.890	1.00	22.61	E
ATOM	5006	CG1	VAL	E	75	72.488	28.657	17.219	1.00	24.39	E
ATOM	5007	CG2	VAL	E	75	73.270	30.798	16.218	1.00	24.00	E
ATOM	5008	C	VAL	E	75	73.639	30.558	19.219	1.00	21.26	E
ATOM	5009	O	VAL	E	75	73.464	31.777	19.164	1.00	20.64	E
ATOM	5010	N	ASP	E	76	73.106	29.802	20.171	1.00	20.84	E
ATOM	5011	CA	ASP	E	76	72.273	30.385	21.220	1.00	23.98	E
ATOM	5012	CB	ASP	E	76	71.022	29.532	21.471	1.00	25.33	E
ATOM	5013	CG	ASP	E	76	70.010	29.605	20.331	1.00	27.46	E
ATOM	5014	OD1	ASP	E	76	69.807	30.697	19.763	1.00	29.45	E
ATOM	5015	OD2	ASP	E	76	69.398	28.566	20.020	1.00	31.17	E
ATOM	5016	C	ASP	E	76	73.044	30.525	22.538	1.00	24.46	E
ATOM	5017	O	ASP	E	76	72.910	31.524	23.247	1.00	25.64	E
ATOM	5018	N	ARG	E	77	73.846	29.515	22.855	1.00	23.56	E
ATOM	5019	CA	ARG	E	77	74.627	29.486	24.085	1.00	22.99	E
ATOM	5020	CB	ARG	E	77	75.176	28.077	24.279	1.00	26.55	E
ATOM	5021	CG	ARG	E	77	75.848	27.806	25.607	1.00	33.45	E
ATOM	5022	CD	ARG	E	77	75.961	26.295	25.825	1.00	37.66	E
ATOM	5023	NE	ARG	E	77	74.639	25.666	25.883	1.00	40.99	E
ATOM	5024	CZ	ARG	E	77	74.423	24.352	25.862	1.00	43.13	E
ATOM	5025	NH1	ARG	E	77	75.438	23.503	25.782	1.00	43.11	E
ATOM	5026	NH2	ARG	E	77	73.183	23.885	25.914	1.00	44.93	E
ATOM	5027	C	ARG	E	77	75.763	30.509	24.078	1.00	23.23	E

ATOM	5028	O	ARG	E	77	76.162	31.022	25.129	1.00	23.14	E
ATOM	5029	N	VAL	E	78	76.275	30.808	22.889	1.00	20.54	E
ATOM	5030	CA	VAL	E	78	77.354	31.767	22.741	1.00	19.56	E
ATOM	5031	CB	VAL	E	78	78.500	31.181	21.891	1.00	19.17	E
ATOM	5032	CG1	VAL	E	78	79.612	32.208	21.724	1.00	17.69	E
ATOM	5033	CG2	VAL	E	78	79.032	29.921	22.541	1.00	19.40	E
ATOM	5034	C	VAL	E	78	76.888	33.075	22.093	1.00	19.95	E
ATOM	5035	O	VAL	E	78	76.786	34.110	22.756	1.00	21.57	E
ATOM	5036	N	CYS	E	79	76.595	33.021	20.799	1.00	17.88	E
ATOM	5037	CA	CYS	E	79	76.181	34.205	20.059	1.00	17.48	E
ATOM	5038	C	CYS	E	79	74.967	34.966	20.620	1.00	18.40	E
ATOM	5039	O	CYS	E	79	75.087	36.146	20.967	1.00	16.69	E
ATOM	5040	CB	CYS	E	79	75.946	33.847	18.592	1.00	17.30	E
ATOM	5041	SG	CYS	E	79	77.361	33.071	17.722	1.00	27.04	E
ATOM	5042	N	ARG	E	80	73.802	34.326	20.717	1.00	17.59	E
ATOM	5043	CA	ARG	E	80	72.641	35.050	21.240	1.00	20.01	E
ATOM	5044	CB	ARG	E	80	71.340	34.256	21.032	1.00	20.22	E
ATOM	5045	CG	ARG	E	80	70.886	34.213	19.584	1.00	22.92	E
ATOM	5046	CD	ARG	E	80	69.423	33.811	19.439	1.00	23.91	E
ATOM	5047	NE	ARG	E	80	68.972	33.965	18.057	1.00	23.49	E
ATOM	5048	CZ	ARG	E	80	69.206	33.089	17.082	1.00	25.16	E
ATOM	5049	NH1	ARG	E	80	69.884	31.975	17.326	1.00	24.15	E
ATOM	5050	NH2	ARG	E	80	68.778	33.336	15.851	1.00	25.51	E
ATOM	5051	C	ARG	E	80	72.804	35.423	22.716	1.00	20.35	E
ATOM	5052	O	ARG	E	80	72.317	36.464	23.153	1.00	17.98	E
ATOM	5053	N	HIS	E	81	73.495	34.581	23.479	1.00	21.22	E
ATOM	5054	CA	HIS	E	81	73.717	34.867	24.895	1.00	22.79	E
ATOM	5055	CB	HIS	E	81	74.467	33.717	25.572	1.00	24.38	E
ATOM	5056	CG	HIS	E	81	74.955	34.046	26.950	1.00	26.42	E
ATOM	5057	CD2	HIS	E	81	76.188	34.381	27.404	1.00	26.61	E
ATOM	5058	ND1	HIS	E	81	74.122	34.080	28.048	1.00	26.60	E
ATOM	5059	CE1	HIS	E	81	74.819	34.420	29.117	1.00	25.75	E
ATOM	5060	NE2	HIS	E	81	76.075	34.609	28.754	1.00	26.16	E
ATOM	5061	C	HIS	E	81	74.531	36.146	25.060	1.00	21.41	E
ATOM	5062	O	HIS	E	81	74.109	37.076	25.742	1.00	19.84	E
ATOM	5063	N	ASN	E	82	75.700	36.188	24.426	1.00	22.13	E
ATOM	5064	CA	ASN	E	82	76.568	37.361	24.535	1.00	21.51	E
ATOM	5065	CB	ASN	E	82	77.927	37.111	23.864	1.00	18.47	E
ATOM	5066	CG	ASN	E	82	78.702	35.982	24.515	1.00	18.09	E
ATOM	5067	OD1	ASN	E	82	78.453	35.632	25.669	1.00	19.05	E
ATOM	5068	ND2	ASN	E	82	79.656	35.409	23.777	1.00	15.06	E
ATOM	5069	C	ASN	E	82	75.936	38.612	23.949	1.00	20.33	E
ATOM	5070	O	ASN	E	82	76.212	39.716	24.412	1.00	22.84	E
ATOM	5071	N	TYR	E	83	75.089	38.454	22.940	1.00	19.71	E
ATOM	5072	CA	TYR	E	83	74.454	39.620	22.336	1.00	20.96	E
ATOM	5073	CB	TYR	E	83	73.619	39.211	21.114	1.00	21.58	E
ATOM	5074	CG	TYR	E	83	73.223	40.368	20.218	1.00	22.56	E
ATOM	5075	CD1	TYR	E	83	72.047	41.090	20.439	1.00	23.70	E
ATOM	5076	CE1	TYR	E	83	71.682	42.152	19.593	1.00	25.46	E
ATOM	5077	CD2	TYR	E	83	74.027	40.736	19.140	1.00	22.35	E
ATOM	5078	CE2	TYR	E	83	73.675	41.788	18.297	1.00	24.48	E
ATOM	5079	CZ	TYR	E	83	72.508	42.491	18.523	1.00	26.06	E
ATOM	5080	OH	TYR	E	83	72.185	43.524	17.671	1.00	28.63	E
ATOM	5081	C	TYR	E	83	73.583	40.345	23.363	1.00	21.22	E
ATOM	5082	O	TYR	E	83	73.399	41.557	23.276	1.00	21.25	E
ATOM	5083	N	GLN	E	84	73.046	39.606	24.333	1.00	22.94	E
ATOM	5084	CA	GLN	E	84	72.234	40.226	25.377	1.00	25.07	E
ATOM	5085	CB	GLN	E	84	71.631	39.180	26.324	1.00	25.76	E
ATOM	5086	CG	GLN	E	84	70.863	38.047	25.653	1.00	30.97	E
ATOM	5087	CD	GLN	E	84	69.889	38.525	24.594	1.00	33.95	E
ATOM	5088	OE1	GLN	E	84	69.055	39.401	24.840	1.00	36.35	E
ATOM	5089	NE2	GLN	E	84	69.986	37.940	23.401	1.00	36.25	E
ATOM	5090	C	GLN	E	84	73.158	41.145	26.174	1.00	25.41	E
ATOM	5091	O	GLN	E	84	72.804	42.290	26.473	1.00	27.11	E
ATOM	5092	N	LEU	E	85	74.344	40.637	26.510	1.00	24.17	E
ATOM	5093	CA	LEU	E	85	75.330	41.413	27.256	1.00	26.47	E
ATOM	5094	CB	LEU	E	85	76.601	40.590	27.515	1.00	26.91	E
ATOM	5095	CG	LEU	E	85	76.485	39.202	28.161	1.00	29.65	E
ATOM	5096	CD1	LEU	E	85	77.872	38.735	28.587	1.00	31.29	E
ATOM	5097	CD2	LEU	E	85	75.564	39.247	29.365	1.00	32.27	E
ATOM	5098	C	LEU	E	85	75.698	42.661	26.459	1.00	26.89	E
ATOM	5099	O	LEU	E	85	75.762	43.757	27.004	1.00	28.24	E
ATOM	5100	N	GLU	E	86	75.941	42.484	25.162	1.00	27.39	E
ATOM	5101	CA	GLU	E	86	76.293	43.603	24.295	1.00	28.02	E

ATOM	5102	CB	GLU	E	86	76.492	43.126	22.852	1.00	26.60	E
ATOM	5103	CG	GLU	E	86	77.524	42.026	22.672	1.00	30.65	E
ATOM	5104	CD	GLU	E	86	78.942	42.457	23.024	1.00	31.17	E
ATOM	5105	OE1	GLU	E	86	79.860	41.612	22.919	1.00	31.68	E
ATOM	5106	OE2	GLU	E	86	79.139	43.631	23.402	1.00	31.77	E
ATOM	5107	C	GLU	E	86	75.165	44.630	24.327	1.00	27.95	E
ATOM	5108	O	GLU	E	86	75.407	45.834	24.257	1.00	24.30	E
ATOM	5109	N	LEU	E	87	73.935	44.130	24.442	1.00	28.96	E
ATOM	5110	CA	LEU	E	87	72.736	44.962	24.468	1.00	32.20	E
ATOM	5111	CB	LEU	E	87	71.496	44.062	24.423	1.00	32.64	E
ATOM	5112	CG	LEU	E	87	70.506	44.100	23.248	1.00	35.59	E
ATOM	5113	CD1	LEU	E	87	71.101	44.734	21.997	1.00	35.24	E
ATOM	5114	CD2	LEU	E	87	70.071	42.675	22.965	1.00	34.35	E
ATOM	5115	C	LEU	E	87	72.669	45.893	25.686	1.00	33.33	E
ATOM	5116	O	LEU	E	87	71.967	46.902	25.663	1.00	32.52	E
ATOM	5117	N	ARG	E	88	73.401	45.560	26.745	1.00	35.06	E
ATOM	5118	CA	ARG	E	88	73.399	46.389	27.948	1.00	37.29	E
ATOM	5119	CB	ARG	E	88	73.348	45.524	29.215	1.00	39.69	E
ATOM	5120	CG	ARG	E	88	72.471	44.275	29.158	1.00	43.37	E
ATOM	5121	CD	ARG	E	88	72.441	43.592	30.529	1.00	45.38	E
ATOM	5122	NE	ARG	E	88	71.846	42.257	30.499	1.00	48.76	E
ATOM	5123	CZ	ARG	E	88	70.625	41.985	30.047	1.00	50.95	E
ATOM	5124	NH1	ARG	E	88	69.854	42.958	29.579	1.00	52.23	E
ATOM	5125	NH2	ARG	E	88	70.171	40.738	30.064	1.00	51.26	E
ATOM	5126	C	ARG	E	88	74.670	47.225	28.010	1.00	37.36	E
ATOM	5127	O	ARG	E	88	74.842	48.044	28.913	1.00	37.55	E
ATOM	5128	N	THR	E	89	75.564	47.019	27.049	1.00	36.40	E
ATOM	5129	CA	THR	E	89	76.834	47.731	27.055	1.00	34.93	E
ATOM	5130	CB	THR	E	89	77.951	46.807	27.590	1.00	36.26	E
ATOM	5131	OG1	THR	E	89	77.973	45.590	26.825	1.00	34.21	E
ATOM	5132	CG2	THR	E	89	77.708	46.478	29.056	1.00	33.95	E
ATOM	5133	C	THR	E	89	77.294	48.304	25.718	1.00	33.37	E
ATOM	5134	O	THR	E	89	76.958	49.431	25.356	1.00	33.30	E
ATOM	5135	N	THR	E	90	78.080	47.510	25.000	1.00	32.11	E
ATOM	5136	CA	THR	E	90	78.639	47.895	23.712	1.00	30.45	E
ATOM	5137	CB	THR	E	90	79.313	46.681	23.041	1.00	31.20	E
ATOM	5138	OG1	THR	E	90	80.238	46.086	23.958	1.00	32.67	E
ATOM	5139	CG2	THR	E	90	80.076	47.109	21.811	1.00	32.64	E
ATOM	5140	C	THR	E	90	77.639	48.504	22.738	1.00	28.40	E
ATOM	5141	O	THR	E	90	77.903	49.538	22.133	1.00	27.20	E
ATOM	5142	N	LEU	E	91	76.489	47.864	22.582	1.00	29.83	E
ATOM	5143	CA	LEU	E	91	75.482	48.361	21.655	1.00	29.52	E
ATOM	5144	CB	LEU	E	91	74.474	47.252	21.354	1.00	27.50	E
ATOM	5145	CG	LEU	E	91	75.091	46.101	20.550	1.00	26.15	E
ATOM	5146	CD1	LEU	E	91	74.102	44.959	20.457	1.00	24.51	E
ATOM	5147	CD2	LEU	E	91	75.487	46.593	19.157	1.00	23.04	E
ATOM	5148	C	LEU	E	91	74.770	49.629	22.129	1.00	30.74	E
ATOM	5149	O	LEU	E	91	73.994	50.228	21.382	1.00	31.46	E
ATOM	5150	N	GLN	E	92	75.035	50.043	23.366	1.00	29.33	E
ATOM	5151	CA	GLN	E	92	74.427	51.259	23.884	1.00	30.04	E
ATOM	5152	CB	GLN	E	92	73.869	51.044	25.294	1.00	31.55	E
ATOM	5153	CG	GLN	E	92	72.500	50.381	25.327	1.00	36.90	E
ATOM	5154	CD	GLN	E	92	71.865	50.426	26.706	1.00	41.59	E
ATOM	5155	OE1	GLN	E	92	70.760	49.920	26.911	1.00	43.76	E
ATOM	5156	NE2	GLN	E	92	72.563	51.037	27.662	1.00	43.75	E
ATOM	5157	C	GLN	E	92	75.430	52.409	23.898	1.00	28.45	E
ATOM	5158	O	GLN	E	92	75.059	53.558	24.125	1.00	28.57	E
ATOM	5159	N	ARG	E	93	76.699	52.098	23.650	1.00	26.37	E
ATOM	5160	CA	ARG	E	93	77.737	53.127	23.633	1.00	26.74	E
ATOM	5161	CB	ARG	E	93	79.112	52.513	23.340	1.00	24.84	E
ATOM	5162	CG	ARG	E	93	80.260	53.525	23.217	1.00	20.15	E
ATOM	5163	CD	ARG	E	93	81.569	52.801	22.894	1.00	20.06	E
ATOM	5164	NE	ARG	E	93	82.718	53.685	22.729	1.00	15.27	E
ATOM	5165	CZ	ARG	E	93	83.316	54.330	23.729	1.00	16.93	E
ATOM	5166	NH1	ARG	E	93	82.875	54.197	24.973	1.00	17.82	E
ATOM	5167	NH2	ARG	E	93	84.367	55.101	23.492	1.00	16.28	E
ATOM	5168	C	ARG	E	93	77.428	54.173	22.576	1.00	28.26	E
ATOM	5169	O	ARG	E	93	77.202	53.847	21.407	1.00	29.80	E
ATOM	5170	N	ARG	E	94	77.411	55.431	22.995	1.00	28.24	E
ATOM	5171	CA	ARG	E	94	77.159	56.529	22.084	1.00	29.74	E
ATOM	5172	CB	ARG	E	94	75.661	56.855	22.053	1.00	32.88	E
ATOM	5173	CG	ARG	E	94	74.912	55.941	21.086	1.00	36.76	E
ATOM	5174	CD	ARG	E	94	73.402	56.055	21.163	1.00	40.38	E
ATOM	5175	NE	ARG	E	94	72.758	55.304	20.080	1.00	44.16	E

ATOM	5176	CZ	ARG	E	94	72.871	53.991	19.894	1.00	43.57	E
ATOM	5177	NH1	ARG	E	94	73.602	53.259	20.720	1.00	45.04	E
ATOM	5178	NH2	ARG	E	94	72.262	53.408	18.869	1.00	45.75	E
ATOM	5179	C	ARG	E	94	77.992	57.734	22.497	1.00	29.26	E
ATOM	5180	O	ARG	E	94	77.773	58.331	23.546	1.00	30.32	E
ATOM	5181	N	VAL	E	95	78.974	58.063	21.667	1.00	26.76	E
ATOM	5182	CA	VAL	E	95	79.859	59.188	21.936	1.00	25.75	E
ATOM	5183	CB	VAL	E	95	81.340	58.763	21.855	1.00	22.33	E
ATOM	5184	CG1	VAL	E	95	82.244	59.914	22.287	1.00	19.80	E
ATOM	5185	CG2	VAL	E	95	81.565	57.534	22.717	1.00	19.11	E
ATOM	5186	C	VAL	E	95	79.600	60.266	20.902	1.00	26.51	E
ATOM	5187	O	VAL	E	95	79.787	60.042	19.703	1.00	27.04	E
ATOM	5188	N	GLU	E	96	79.160	61.430	21.366	1.00	27.28	E
ATOM	5189	CA	GLU	E	96	78.870	62.536	20.466	1.00	28.16	E
ATOM	5190	CB	GLU	E	96	78.260	63.716	21.227	1.00	30.40	E
ATOM	5191	CG	GLU	E	96	76.965	63.396	21.952	1.00	34.36	E
ATOM	5192	CD	GLU	E	96	76.348	64.625	22.609	1.00	36.84	E
ATOM	5193	OE1	GLU	E	96	75.295	64.478	23.272	1.00	38.81	E
ATOM	5194	OE2	GLU	E	96	76.914	65.734	22.460	1.00	35.73	E
ATOM	5195	C	GLU	E	96	80.148	62.987	19.793	1.00	25.65	E
ATOM	5196	O	GLU	E	96	81.176	63.171	20.440	1.00	24.93	E
ATOM	5197	N	PRO	E	97	80.101	63.168	18.473	1.00	25.41	E
ATOM	5198	CD	PRO	E	97	78.977	62.979	17.539	1.00	24.36	E
ATOM	5199	CA	PRO	E	97	81.304	63.603	17.770	1.00	24.81	E
ATOM	5200	CB	PRO	E	97	80.927	63.416	16.306	1.00	24.85	E
ATOM	5201	CG	PRO	E	97	79.456	63.717	16.309	1.00	25.36	E
ATOM	5202	C	PRO	E	97	81.643	65.048	18.089	1.00	24.48	E
ATOM	5203	O	PRO	E	97	80.761	65.844	18.419	1.00	23.85	E
ATOM	5204	N	THR	E	98	82.927	65.377	18.025	1.00	22.82	E
ATOM	5205	CA	THR	E	98	83.340	66.748	18.244	1.00	24.12	E
ATOM	5206	CB	THR	E	98	84.679	66.852	19.019	1.00	26.31	E
ATOM	5207	OG1	THR	E	98	85.744	66.355	18.205	1.00	34.47	E
ATOM	5208	CG2	THR	E	98	84.623	66.049	20.302	1.00	23.83	E
ATOM	5209	C	THR	E	98	83.519	67.254	16.817	1.00	22.12	E
ATOM	5210	O	THR	E	98	84.162	66.601	15.993	1.00	21.35	E
ATOM	5211	N	VAL	E	99	82.923	68.400	16.516	1.00	21.99	E
ATOM	5212	CA	VAL	E	99	83.001	68.957	15.177	1.00	20.67	E
ATOM	5213	CB	VAL	E	99	81.585	69.217	14.619	1.00	19.57	E
ATOM	5214	CG1	VAL	E	99	81.667	69.645	13.154	1.00	14.62	E
ATOM	5215	CG2	VAL	E	99	80.732	67.944	14.766	1.00	15.20	E
ATOM	5216	C	VAL	E	99	83.814	70.240	15.158	1.00	22.05	E
ATOM	5217	O	VAL	E	99	83.524	71.194	15.884	1.00	22.27	E
ATOM	5218	N	THR	E	100	84.827	70.250	14.304	1.00	21.34	E
ATOM	5219	CA	THR	E	100	85.728	71.376	14.176	1.00	23.10	E
ATOM	5220	CB	THR	E	100	87.104	71.024	14.786	1.00	24.55	E
ATOM	5221	OG1	THR	E	100	86.941	70.728	16.180	1.00	30.47	E
ATOM	5222	CG2	THR	E	100	88.079	72.183	14.634	1.00	27.79	E
ATOM	5223	C	THR	E	100	85.934	71.777	12.722	1.00	23.36	E
ATOM	5224	O	THR	E	100	86.024	70.926	11.842	1.00	21.77	E
ATOM	5225	N	ILE	E	101	86.009	73.082	12.473	1.00	24.40	E
ATOM	5226	CA	ILE	E	101	86.236	73.584	11.124	1.00	25.31	E
ATOM	5227	CB	ILE	E	101	85.092	74.518	10.645	1.00	24.21	E
ATOM	5228	CG2	ILE	E	101	85.398	75.044	9.245	1.00	22.51	E
ATOM	5229	CG1	ILE	E	101	83.760	73.768	10.636	1.00	24.86	E
ATOM	5230	CD1	ILE	E	101	82.584	74.635	10.197	1.00	25.22	E
ATOM	5231	C	ILE	E	101	87.538	74.372	11.116	1.00	26.66	E
ATOM	5232	O	ILE	E	101	87.859	75.065	12.074	1.00	26.18	E
ATOM	5233	N	SER	E	102	88.287	74.262	10.029	1.00	31.17	E
ATOM	5234	CA	SER	E	102	89.547	74.977	9.902	1.00	35.36	E
ATOM	5235	CB	SER	E	102	90.619	74.306	10.755	1.00	34.20	E
ATOM	5236	OG	SER	E	102	90.777	72.953	10.374	1.00	40.09	E
ATOM	5237	C	SER	E	102	89.976	74.979	8.448	1.00	36.82	E
ATOM	5238	O	SER	E	102	89.913	73.953	7.777	1.00	36.68	E
ATOM	5239	N	PRO	E	103	90.404	76.139	7.932	1.00	39.96	E
ATOM	5240	CD	PRO	E	103	90.458	77.473	8.553	1.00	40.07	E
ATOM	5241	CA	PRO	E	103	90.831	76.190	6.532	1.00	42.01	E
ATOM	5242	CB	PRO	E	103	90.856	77.682	6.237	1.00	41.76	E
ATOM	5243	CG	PRO	E	103	91.282	78.258	7.556	1.00	42.86	E
ATOM	5244	C	PRO	E	103	92.196	75.534	6.390	1.00	44.62	E
ATOM	5245	O	PRO	E	103	92.943	75.430	7.365	1.00	44.53	E
ATOM	5246	N	SER	E	104	92.514	75.086	5.181	1.00	47.92	E
ATOM	5247	CA	SER	E	104	93.789	74.426	4.920	1.00	50.83	E
ATOM	5248	CB	SER	E	104	93.712	73.637	3.612	1.00	52.33	E
ATOM	5249	OG	SER	E	104	94.904	72.901	3.396	1.00	55.60	E

ATOM	5250	C	SER	E	104	94.941	75.422	4.845	1.00	52.18	E
ATOM	5251	O	SER	E	104	96.080	75.093	5.186	1.00	53.53	E
ATOM	5252	N	ASN	E	113	90.669	78.112	-1.692	1.00	48.40	E
ATOM	5253	CA	ASN	E	113	90.651	77.795	-0.269	1.00	47.57	E
ATOM	5254	CB	ASN	E	113	89.863	78.854	0.496	1.00	51.34	E
ATOM	5255	CG	ASN	E	113	90.504	80.219	0.417	1.00	52.99	E
ATOM	5256	OD1	ASN	E	113	90.693	80.765	-0.670	1.00	55.11	E
ATOM	5257	ND2	ASN	E	113	90.845	80.781	1.572	1.00	55.09	E
ATOM	5258	C	ASN	E	113	90.045	76.424	-0.001	1.00	44.87	E
ATOM	5259	O	ASN	E	113	89.374	75.852	-0.860	1.00	44.99	E
ATOM	5260	N	LEU	E	114	90.282	75.904	1.197	1.00	41.65	E
ATOM	5261	CA	LEU	E	114	89.765	74.592	1.568	1.00	38.53	E
ATOM	5262	CB	LEU	E	114	90.823	73.521	1.287	1.00	38.84	E
ATOM	5263	CG	LEU	E	114	90.383	72.060	1.441	1.00	40.32	E
ATOM	5264	CD1	LEU	E	114	89.314	71.726	0.400	1.00	39.94	E
ATOM	5265	CD2	LEU	E	114	91.586	71.145	1.266	1.00	40.52	E
ATOM	5266	C	LEU	E	114	89.349	74.523	3.036	1.00	34.78	E
ATOM	5267	O	LEU	E	114	90.173	74.684	3.929	1.00	33.51	E
ATOM	5268	N	LEU	E	115	88.063	74.293	3.278	1.00	32.05	E
ATOM	5269	CA	LEU	E	115	87.550	74.181	4.641	1.00	29.68	E
ATOM	5270	CB	LEU	E	115	86.158	74.809	4.754	1.00	29.84	E
ATOM	5271	CG	LEU	E	115	86.046	76.257	5.241	1.00	31.52	E
ATOM	5272	CD1	LEU	E	115	87.101	77.140	4.574	1.00	32.51	E
ATOM	5273	CD2	LEU	E	115	84.636	76.762	4.948	1.00	30.75	E
ATOM	5274	C	LEU	E	115	87.472	72.712	5.034	1.00	27.57	E
ATOM	5275	O	LEU	E	115	86.871	71.900	4.331	1.00	25.33	E
ATOM	5276	N	VAL	E	116	88.089	72.381	6.161	1.00	26.32	E
ATOM	5277	CA	VAL	E	116	88.099	71.014	6.651	1.00	24.42	E
ATOM	5278	CB	VAL	E	116	89.513	70.572	7.075	1.00	24.51	E
ATOM	5279	CG1	VAL	E	116	89.467	69.160	7.641	1.00	22.66	E
ATOM	5280	CG2	VAL	E	116	90.458	70.643	5.879	1.00	26.70	E
ATOM	5281	C	VAL	E	116	87.195	70.842	7.846	1.00	22.77	E
ATOM	5282	O	VAL	E	116	87.376	71.496	8.868	1.00	23.04	E
ATOM	5283	N	CYS	E	117	86.208	69.968	7.717	1.00	22.34	E
ATOM	5284	CA	CYS	E	117	85.326	69.711	8.840	1.00	21.65	E
ATOM	5285	C	CYS	E	117	85.769	68.391	9.466	1.00	19.44	E
ATOM	5286	O	CYS	E	117	85.607	67.319	8.877	1.00	18.95	E
ATOM	5287	CB	CYS	E	117	83.863	69.626	8.401	1.00	22.57	E
ATOM	5288	SG	CYS	E	117	82.771	69.420	9.844	1.00	25.79	E
ATOM	5289	N	SER	E	118	86.355	68.488	10.654	1.00	19.92	E
ATOM	5290	CA	SER	E	118	86.837	67.330	11.387	1.00	17.98	E
ATOM	5291	CB	SER	E	118	88.115	67.671	12.146	1.00	18.33	E
ATOM	5292	OG	SER	E	118	89.121	68.117	11.260	1.00	24.58	E
ATOM	5293	C	SER	E	118	85.798	66.860	12.377	1.00	17.01	E
ATOM	5294	O	SER	E	118	85.507	67.543	13.354	1.00	16.69	E
ATOM	5295	N	VAL	E	119	85.240	65.688	12.112	1.00	16.58	E
ATOM	5296	CA	VAL	E	119	84.242	65.095	12.985	1.00	16.03	E
ATOM	5297	CB	VAL	E	119	83.040	64.582	12.160	1.00	15.47	E
ATOM	5298	CG1	VAL	E	119	81.918	64.147	13.077	1.00	13.75	E
ATOM	5299	CG2	VAL	E	119	82.559	65.686	11.216	1.00	10.95	E
ATOM	5300	C	VAL	E	119	85.018	63.960	13.638	1.00	17.51	E
ATOM	5301	O	VAL	E	119	85.238	62.906	13.042	1.00	19.30	E
ATOM	5302	N	THR	E	120	85.442	64.203	14.871	1.00	18.44	E
ATOM	5303	CA	THR	E	120	86.265	63.266	15.616	1.00	18.41	E
ATOM	5304	CB	THR	E	120	87.562	63.962	16.042	1.00	18.11	E
ATOM	5305	OG1	THR	E	120	87.242	65.078	16.887	1.00	17.18	E
ATOM	5306	CG2	THR	E	120	88.304	64.481	14.835	1.00	16.77	E
ATOM	5307	C	THR	E	120	85.655	62.656	16.875	1.00	20.11	E
ATOM	5308	O	THR	E	120	84.665	63.148	17.417	1.00	21.96	E
ATOM	5309	N	ASP	E	121	86.272	61.566	17.319	1.00	19.96	E
ATOM	5310	CA	ASP	E	121	85.882	60.864	18.529	1.00	21.06	E
ATOM	5311	CB	ASP	E	121	86.313	61.686	19.745	1.00	25.93	E
ATOM	5312	CG	ASP	E	121	87.814	61.765	19.882	1.00	30.02	E
ATOM	5313	OD1	ASP	E	121	88.291	62.524	20.756	1.00	34.97	E
ATOM	5314	OD2	ASP	E	121	88.513	61.063	19.114	1.00	31.15	E
ATOM	5315	C	ASP	E	121	84.431	60.463	18.709	1.00	20.39	E
ATOM	5316	O	ASP	E	121	83.857	60.698	19.766	1.00	22.05	E
ATOM	5317	N	PHE	E	122	83.827	59.841	17.708	1.00	19.69	E
ATOM	5318	CA	PHE	E	122	82.443	59.429	17.873	1.00	18.28	E
ATOM	5319	CB	PHE	E	122	81.538	60.108	16.843	1.00	16.99	E
ATOM	5320	CG	PHE	E	122	81.905	59.821	15.417	1.00	16.67	E
ATOM	5321	CD1	PHE	E	122	82.770	60.661	14.725	1.00	16.72	E
ATOM	5322	CD2	PHE	E	122	81.370	58.717	14.756	1.00	17.17	E
ATOM	5323	CE1	PHE	E	122	83.096	60.410	13.384	1.00	17.00	E

ATOM	5324	CE2	PHE	E	122	81.686	58.456	13.419	1.00	16.82	E
ATOM	5325	CZ	PHE	E	122	82.549	59.305	12.733	1.00	15.81	E
ATOM	5326	C	PHE	E	122	82.287	57.925	17.774	1.00	18.35	E
ATOM	5327	O	PHE	E	122	83.168	57.231	17.272	1.00	15.90	E
ATOM	5328	N	TYR	E	123	81.157	57.436	18.276	1.00	19.49	E
ATOM	5329	CA	TYR	E	123	80.818	56.021	18.243	1.00	20.92	E
ATOM	5330	CB	TYR	E	123	81.523	55.261	19.374	1.00	21.02	E
ATOM	5331	CG	TYR	E	123	81.387	53.762	19.247	1.00	20.05	E
ATOM	5332	CD1	TYR	E	123	80.242	53.103	19.688	1.00	21.66	E
ATOM	5333	CE1	TYR	E	123	80.095	51.726	19.516	1.00	21.85	E
ATOM	5334	CD2	TYR	E	123	82.383	53.009	18.633	1.00	20.08	E
ATOM	5335	CE2	TYR	E	123	82.250	51.643	18.455	1.00	19.20	E
ATOM	5336	CZ	TYR	E	123	81.105	51.002	18.896	1.00	22.24	E
ATOM	5337	OH	TYR	E	123	80.970	49.640	18.712	1.00	25.26	E
ATOM	5338	C	TYR	E	123	79.311	55.957	18.440	1.00	21.42	E
ATOM	5339	O	TYR	E	123	78.778	56.647	19.305	1.00	23.90	E
ATOM	5340	N	PRO	E	124	78.609	55.100	17.676	1.00	20.39	E
ATOM	5341	CD	PRO	E	124	77.155	54.937	17.844	1.00	21.24	E
ATOM	5342	CA	PRO	E	124	79.113	54.177	16.655	1.00	21.61	E
ATOM	5343	CB	PRO	E	124	77.956	53.188	16.500	1.00	19.35	E
ATOM	5344	CG	PRO	E	124	76.776	54.056	16.670	1.00	19.34	E
ATOM	5345	C	PRO	E	124	79.549	54.802	15.325	1.00	20.84	E
ATOM	5346	O	PRO	E	124	79.602	56.024	15.184	1.00	22.13	E
ATOM	5347	N	ALA	E	125	79.862	53.940	14.361	1.00	22.61	E
ATOM	5348	CA	ALA	E	125	80.329	54.341	13.027	1.00	25.48	E
ATOM	5349	CB	ALA	E	125	80.860	53.121	12.288	1.00	26.06	E
ATOM	5350	C	ALA	E	125	79.311	55.058	12.137	1.00	27.38	E
ATOM	5351	O	ALA	E	125	79.681	55.906	11.332	1.00	29.08	E
ATOM	5352	N	GLN	E	126	78.039	54.706	12.268	1.00	29.18	E
ATOM	5353	CA	GLN	E	126	76.990	55.312	11.455	1.00	29.94	E
ATOM	5354	CB	GLN	E	126	75.625	54.737	11.848	1.00	33.48	E
ATOM	5355	CG	GLN	E	126	75.536	53.200	11.840	1.00	39.27	E
ATOM	5356	CD	GLN	E	126	76.067	52.537	13.117	1.00	41.92	E
ATOM	5357	OE1	GLN	E	126	77.271	52.523	13.379	1.00	44.02	E
ATOM	5358	NE2	GLN	E	126	75.159	51.981	13.913	1.00	43.83	E
ATOM	5359	C	GLN	E	126	76.977	56.829	11.621	1.00	28.88	E
ATOM	5360	O	GLN	E	126	76.739	57.331	12.719	1.00	28.83	E
ATOM	5361	N	ILE	E	127	77.221	57.558	10.532	1.00	27.90	E
ATOM	5362	CA	ILE	E	127	77.245	59.018	10.591	1.00	25.67	E
ATOM	5363	CB	ILE	E	127	78.611	59.514	11.150	1.00	25.23	E
ATOM	5364	CG2	ILE	E	127	79.693	59.398	10.084	1.00	21.16	E
ATOM	5365	CG1	ILE	E	127	78.504	60.965	11.610	1.00	22.40	E
ATOM	5366	CD1	ILE	E	127	79.610	61.376	12.546	1.00	25.35	E
ATOM	5367	C	ILE	E	127	76.985	59.673	9.230	1.00	26.38	E
ATOM	5368	O	ILE	E	127	77.196	59.065	8.182	1.00	26.20	E
ATOM	5369	N	LYS	E	128	76.521	60.916	9.252	1.00	25.64	E
ATOM	5370	CA	LYS	E	128	76.248	61.635	8.016	1.00	29.02	E
ATOM	5371	CB	LYS	E	128	74.754	61.566	7.671	1.00	29.97	E
ATOM	5372	CG	LYS	E	128	74.408	62.178	6.317	1.00	35.17	E
ATOM	5373	CD	LYS	E	128	75.175	61.487	5.183	1.00	39.63	E
ATOM	5374	CE	LYS	E	128	74.936	62.163	3.836	1.00	41.20	E
ATOM	5375	NZ	LYS	E	128	75.685	61.492	2.731	1.00	44.74	E
ATOM	5376	C	LYS	E	128	76.683	63.090	8.154	1.00	28.40	E
ATOM	5377	O	LYS	E	128	76.203	63.812	9.028	1.00	27.15	E
ATOM	5378	N	VAL	E	129	77.600	63.506	7.287	1.00	28.99	E
ATOM	5379	CA	VAL	E	129	78.119	64.866	7.304	1.00	29.32	E
ATOM	5380	CB	VAL	E	129	79.651	64.860	7.502	1.00	30.69	E
ATOM	5381	CG1	VAL	E	129	80.171	66.282	7.654	1.00	27.54	E
ATOM	5382	CG2	VAL	E	129	80.014	64.012	8.721	1.00	30.82	E
ATOM	5383	C	VAL	E	129	77.788	65.574	5.992	1.00	30.45	E
ATOM	5384	O	VAL	E	129	78.042	65.039	4.915	1.00	30.36	E
ATOM	5385	N	ARG	E	130	77.221	66.775	6.090	1.00	31.17	E
ATOM	5386	CA	ARG	E	130	76.851	67.562	4.914	1.00	32.17	E
ATOM	5387	CB	ARG	E	130	75.330	67.626	4.764	1.00	34.73	E
ATOM	5388	CG	ARG	E	130	74.632	66.335	4.400	1.00	40.85	E
ATOM	5389	CD	ARG	E	130	73.121	66.527	4.511	1.00	46.16	E
ATOM	5390	NE	ARG	E	130	72.365	65.456	3.864	1.00	51.33	E
ATOM	5391	CZ	ARG	E	130	71.046	65.308	3.959	1.00	53.45	E
ATOM	5392	NH1	ARG	E	130	70.327	66.162	4.680	1.00	54.21	E
ATOM	5393	NH2	ARG	E	130	70.444	64.307	3.329	1.00	53.97	E
ATOM	5394	C	ARG	E	130	77.359	68.994	5.017	1.00	30.88	E
ATOM	5395	O	ARG	E	130	77.321	69.590	6.093	1.00	30.84	E
ATOM	5396	N	TRP	E	131	77.831	69.542	3.900	1.00	29.14	E
ATOM	5397	CA	TRP	E	131	78.291	70.928	3.865	1.00	29.57	E

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ATOM	5398	CB	TRP	E	131	79.538	71.086	2.996	1.00	27.97	E
ATOM	5399	CG	TRP	E	131	80.809	70.979	3.760	1.00	29.37	E
ATOM	5400	CD2	TRP	E	131	81.342	71.949	4.671	1.00	29.95	E
ATOM	5401	CE2	TRP	E	131	82.551	71.427	5.174	1.00	29.75	E
ATOM	5402	CE3	TRP	E	131	80.913	73.209	5.111	1.00	30.39	E
ATOM	5403	CD1	TRP	E	131	81.689	69.941	3.747	1.00	29.02	E
ATOM	5404	NE1	TRP	E	131	82.738	70.200	4.592	1.00	30.01	E
ATOM	5405	CZ2	TRP	E	131	83.340	72.119	6.095	1.00	28.79	E
ATOM	5406	CZ3	TRP	E	131	81.697	73.900	6.027	1.00	31.30	E
ATOM	5407	CH2	TRP	E	131	82.900	73.350	6.509	1.00	31.69	E
ATOM	5408	C	TRP	E	131	77.185	71.817	3.301	1.00	30.08	E
ATOM	5409	O	TRP	E	131	76.449	71.413	2.392	1.00	29.15	E
ATOM	5410	N	PHE	E	132	77.081	73.027	3.842	1.00	29.87	E
ATOM	5411	CA	PHE	E	132	76.078	73.985	3.405	1.00	30.98	E
ATOM	5412	CB	PHE	E	132	74.963	74.094	4.443	1.00	32.09	E
ATOM	5413	CG	PHE	E	132	74.041	72.918	4.461	1.00	33.03	E
ATOM	5414	CD1	PHE	E	132	72.913	72.896	3.650	1.00	35.25	E
ATOM	5415	CD2	PHE	E	132	74.306	71.822	5.273	1.00	33.31	E
ATOM	5416	CE1	PHE	E	132	72.055	71.794	3.646	1.00	35.49	E
ATOM	5417	CE2	PHE	E	132	73.460	70.717	5.279	1.00	35.47	E
ATOM	5418	CZ	PHE	E	132	72.330	70.704	4.461	1.00	35.97	E
ATOM	5419	C	PHE	E	132	76.668	75.364	3.182	1.00	32.06	E
ATOM	5420	O	PHE	E	132	77.537	75.812	3.929	1.00	29.15	E
ATOM	5421	N	ARG	E	133	76.186	76.026	2.138	1.00	34.68	E
ATOM	5422	CA	ARG	E	133	76.613	77.375	1.809	1.00	37.78	E
ATOM	5423	CB	ARG	E	133	77.281	77.420	0.434	1.00	40.14	E
ATOM	5424	CG	ARG	E	133	77.755	78.810	0.005	1.00	43.27	E
ATOM	5425	CD	ARG	E	133	78.474	78.742	-1.341	1.00	46.34	E
ATOM	5426	NE	ARG	E	133	79.096	80.006	-1.738	1.00	49.86	E
ATOM	5427	CZ	ARG	E	133	78.441	81.058	-2.226	1.00	51.63	E
ATOM	5428	NH1	ARG	E	133	77.124	81.018	-2.387	1.00	51.33	E
ATOM	5429	NH2	ARG	E	133	79.111	82.155	-2.562	1.00	52.46	E
ATOM	5430	C	ARG	E	133	75.343	78.204	1.792	1.00	38.70	E
ATOM	5431	O	ARG	E	133	74.569	78.154	0.835	1.00	38.81	E
ATOM	5432	N	ASN	E	134	75.119	78.940	2.872	1.00	39.37	E
ATOM	5433	CA	ASN	E	134	73.941	79.787	2.984	1.00	42.21	E
ATOM	5434	CB	ASN	E	134	74.040	80.952	1.988	1.00	40.37	E
ATOM	5435	CG	ASN	E	134	75.383	81.667	2.051	1.00	39.50	E
ATOM	5436	OD1	ASN	E	134	75.796	82.151	3.104	1.00	35.36	E
ATOM	5437	ND2	ASN	E	134	76.071	81.733	0.917	1.00	39.94	E
ATOM	5438	C	ASN	E	134	72.652	79.000	2.734	1.00	43.61	E
ATOM	5439	O	ASN	E	134	71.899	79.306	1.809	1.00	45.62	E
ATOM	5440	N	ASP	E	135	72.403	77.983	3.550	1.00	45.40	E
ATOM	5441	CA	ASP	E	135	71.189	77.178	3.413	1.00	47.16	E
ATOM	5442	C	ASP	E	135	71.147	76.279	2.173	1.00	48.15	E
ATOM	5443	O	ASP	E	135	70.205	75.504	1.996	1.00	49.25	E
ATOM	5444	N	GLN	E	136	72.158	76.387	1.316	1.00	48.16	E
ATOM	5445	CA	GLN	E	136	72.226	75.561	0.113	1.00	47.50	E
ATOM	5446	C	GLN	E	136	73.254	74.445	0.313	1.00	47.38	E
ATOM	5447	O	GLN	E	136	74.418	74.711	0.627	1.00	46.25	E
ATOM	5448	N	GLU	E	137	72.829	73.197	0.139	1.00	47.09	E
ATOM	5449	CA	GLU	E	137	73.749	72.079	0.308	1.00	47.41	E
ATOM	5450	CB	GLU	E	137	72.992	70.752	0.406	1.00	47.53	E
ATOM	5451	CG	GLU	E	137	73.921	69.570	0.653	1.00	49.67	E
ATOM	5452	CD	GLU	E	137	73.210	68.334	1.166	1.00	51.28	E
ATOM	5453	OE1	GLU	E	137	73.911	67.336	1.432	1.00	52.31	E
ATOM	5454	OE2	GLU	E	137	71.965	68.352	1.306	1.00	51.54	E
ATOM	5455	C	GLU	E	137	74.755	72.016	-0.833	1.00	47.37	E
ATOM	5456	O	GLU	E	137	74.397	72.163	-2.000	1.00	47.51	E
ATOM	5457	N	GLU	E	138	76.018	71.809	-0.477	1.00	47.53	E
ATOM	5458	CA	GLU	E	138	77.104	71.724	-1.444	1.00	48.48	E
ATOM	5459	CB	GLU	E	138	78.266	72.617	-1.011	1.00	49.89	E
ATOM	5460	CG	GLU	E	138	77.949	74.096	-0.973	1.00	54.83	E
ATOM	5461	CD	GLU	E	138	77.911	74.720	-2.354	1.00	57.91	E
ATOM	5462	OE1	GLU	E	138	78.953	74.686	-3.044	1.00	59.04	E
ATOM	5463	OE2	GLU	E	138	76.846	75.247	-2.748	1.00	58.96	E
ATOM	5464	C	GLU	E	138	77.593	70.284	-1.532	1.00	48.42	E
ATOM	5465	O	GLU	E	138	77.898	69.665	-0.513	1.00	48.62	E
ATOM	5466	N	THR	E	139	77.665	69.754	-2.748	1.00	47.87	E
ATOM	5467	CA	THR	E	139	78.135	68.387	-2.959	1.00	48.16	E
ATOM	5468	CB	THR	E	139	77.027	67.498	-3.556	1.00	49.05	E
ATOM	5469	OG1	THR	E	139	76.464	68.140	-4.710	1.00	51.25	E
ATOM	5470	CG2	THR	E	139	75.938	67.249	-2.525	1.00	48.03	E
ATOM	5471	C	THR	E	139	79.339	68.401	-3.895	1.00	46.96	E

ATOM	5472	O	THR	E	139	80.245	67.574	-3.779	1.00	46.46	E
ATOM	5473	N	ALA	E	140	79.339	69.346	-4.827	1.00	46.59	E
ATOM	5474	CA	ALA	E	140	80.446	69.488	-5.761	1.00	45.07	E
ATOM	5475	CB	ALA	E	140	79.997	70.244	-7.008	1.00	44.64	E
ATOM	5476	C	ALA	E	140	81.518	70.276	-5.019	1.00	43.57	E
ATOM	5477	O	ALA	E	140	81.224	71.293	-4.386	1.00	43.33	E
ATOM	5478	N	GLY	E	141	82.756	69.805	-5.091	1.00	41.31	E
ATOM	5479	CA	GLY	E	141	83.833	70.485	-4.398	1.00	38.27	E
ATOM	5480	C	GLY	E	141	84.053	69.854	-3.034	1.00	36.91	E
ATOM	5481	O	GLY	E	141	84.930	70.264	-2.272	1.00	37.78	E
ATOM	5482	N	VAL	E	142	83.245	68.849	-2.722	1.00	33.36	E
ATOM	5483	CA	VAL	E	142	83.363	68.164	-1.449	1.00	32.16	E
ATOM	5484	CB	VAL	E	142	81.978	67.844	-0.847	1.00	31.40	E
ATOM	5485	CG1	VAL	E	142	82.140	66.995	0.407	1.00	28.96	E
ATOM	5486	CG2	VAL	E	142	81.245	69.134	-0.516	1.00	33.20	E
ATOM	5487	C	VAL	E	142	84.140	66.859	-1.576	1.00	31.49	E
ATOM	5488	O	VAL	E	142	83.862	66.032	-2.450	1.00	31.67	E
ATOM	5489	N	VAL	E	143	85.118	66.684	-0.696	1.00	30.51	E
ATOM	5490	CA	VAL	E	143	85.922	65.473	-0.675	1.00	30.35	E
ATOM	5491	CB	VAL	E	143	87.367	65.731	-1.161	1.00	30.33	E
ATOM	5492	CG1	VAL	E	143	88.096	64.408	-1.348	1.00	32.44	E
ATOM	5493	CG2	VAL	E	143	87.347	66.503	-2.460	1.00	33.96	E
ATOM	5494	C	VAL	E	143	85.966	64.973	0.767	1.00	29.68	E
ATOM	5495	O	VAL	E	143	86.242	65.733	1.695	1.00	29.63	E
ATOM	5496	N	SER	E	144	85.696	63.689	0.946	1.00	28.32	E
ATOM	5497	CA	SER	E	144	85.703	63.090	2.268	1.00	25.38	E
ATOM	5498	CB	SER	E	144	84.295	62.613	2.622	1.00	26.70	E
ATOM	5499	OG	SER	E	144	84.300	61.845	3.807	1.00	28.37	E
ATOM	5500	C	SER	E	144	86.663	61.916	2.361	1.00	24.56	E
ATOM	5501	O	SER	E	144	86.824	61.148	1.412	1.00	23.42	E
ATOM	5502	N	THR	E	145	87.320	61.790	3.506	1.00	24.40	E
ATOM	5503	CA	THR	E	145	88.218	60.666	3.726	1.00	24.38	E
ATOM	5504	CB	THR	E	145	89.103	60.849	4.983	1.00	24.55	E
ATOM	5505	OG1	THR	E	145	88.273	60.815	6.155	1.00	21.59	E
ATOM	5506	CG2	THR	E	145	89.858	62.162	4.935	1.00	24.64	E
ATOM	5507	C	THR	E	145	87.256	59.539	4.055	1.00	23.78	E
ATOM	5508	O	THR	E	145	86.064	59.766	4.242	1.00	23.97	E
ATOM	5509	N	PRO	E	146	87.745	58.300	4.099	1.00	25.25	E
ATOM	5510	CD	PRO	E	146	88.993	57.713	3.585	1.00	25.42	E
ATOM	5511	CA	PRO	E	146	86.770	57.264	4.447	1.00	25.00	E
ATOM	5512	CB	PRO	E	146	87.439	55.983	3.951	1.00	26.60	E
ATOM	5513	CG	PRO	E	146	88.905	56.293	4.094	1.00	27.24	E
ATOM	5514	C	PRO	E	146	86.597	57.284	5.976	1.00	23.26	E
ATOM	5515	O	PRO	E	146	87.286	58.030	6.672	1.00	21.73	E
ATOM	5516	N	LEU	E	147	85.669	56.492	6.495	1.00	23.85	E
ATOM	5517	CA	LEU	E	147	85.476	56.419	7.936	1.00	23.63	E
ATOM	5518	CB	LEU	E	147	84.355	55.428	8.260	1.00	25.11	E
ATOM	5519	CG	LEU	E	147	83.976	55.241	9.731	1.00	28.28	E
ATOM	5520	CD1	LEU	E	147	83.392	56.530	10.270	1.00	29.44	E
ATOM	5521	CD2	LEU	E	147	82.965	54.116	9.867	1.00	28.72	E
ATOM	5522	C	LEU	E	147	86.812	55.915	8.503	1.00	22.77	E
ATOM	5523	O	LEU	E	147	87.366	54.944	8.003	1.00	23.04	E
ATOM	5524	N	ILE	E	148	87.337	56.574	9.530	1.00	21.06	E
ATOM	5525	CA	ILE	E	148	88.614	56.156	10.102	1.00	19.40	E
ATOM	5526	CB	ILE	E	148	89.588	57.355	10.200	1.00	20.05	E
ATOM	5527	CG2	ILE	E	148	90.903	56.922	10.835	1.00	19.93	E
ATOM	5528	CG1	ILE	E	148	89.854	57.918	8.803	1.00	17.58	E
ATOM	5529	CD1	ILE	E	148	90.594	59.225	8.821	1.00	20.23	E
ATOM	5530	C	ILE	E	148	88.449	55.534	11.489	1.00	17.19	E
ATOM	5531	O	ILE	E	148	87.820	56.118	12.360	1.00	15.81	E
ATOM	5532	N	ARG	E	149	89.015	54.344	11.677	1.00	15.23	E
ATOM	5533	CA	ARG	E	149	88.948	53.638	12.956	1.00	16.42	E
ATOM	5534	CB	ARG	E	149	88.906	52.128	12.724	1.00	20.12	E
ATOM	5535	CG	ARG	E	149	88.903	51.289	14.000	1.00	21.32	E
ATOM	5536	CD	ARG	E	149	88.963	49.802	13.649	1.00	22.44	E
ATOM	5537	NE	ARG	E	149	87.825	49.382	12.830	1.00	22.55	E
ATOM	5538	CZ	ARG	E	149	86.623	49.084	13.313	1.00	22.89	E
ATOM	5539	NH1	ARG	E	149	85.650	48.718	12.490	1.00	24.25	E
ATOM	5540	NH2	ARG	E	149	86.398	49.139	14.619	1.00	23.36	E
ATOM	5541	C	ARG	E	149	90.174	53.983	13.786	1.00	16.33	E
ATOM	5542	O	ARG	E	149	91.305	53.734	13.363	1.00	16.45	E
ATOM	5543	N	ASN	E	150	89.953	54.558	14.963	1.00	15.72	E
ATOM	5544	CA	ASN	E	150	91.061	54.948	15.825	1.00	15.93	E
ATOM	5545	CB	ASN	E	150	90.662	56.125	16.740	1.00	13.37	E

ATOM	5546	CG	ASN	E	150	90.278	57.383	15.955	1.00	15.55	E
ATOM	5547	OD1	ASN	E	150	90.922	57.739	14.955	1.00	14.20	E
ATOM	5548	ND2	ASN	E	150	89.233	58.068	16.414	1.00	15.61	E
ATOM	5549	C	ASN	E	150	91.576	53.786	16.670	1.00	16.79	E
ATOM	5550	O	ASN	E	150	92.694	53.838	17.180	1.00	18.80	E
ATOM	5551	N	GLY	E	151	90.764	52.745	16.813	1.00	16.63	E
ATOM	5552	CA	GLY	E	151	91.164	51.587	17.593	1.00	18.68	E
ATOM	5553	C	GLY	E	151	90.879	51.684	19.080	1.00	20.19	E
ATOM	5554	O	GLY	E	151	91.087	50.725	19.818	1.00	21.39	E
ATOM	5555	N	ASP	E	152	90.409	52.836	19.539	1.00	19.57	E
ATOM	5556	CA	ASP	E	152	90.108	52.986	20.954	1.00	19.09	E
ATOM	5557	CB	ASP	E	152	90.865	54.177	21.531	1.00	18.53	E
ATOM	5558	CG	ASP	E	152	90.498	55.481	20.856	1.00	21.27	E
ATOM	5559	OD1	ASP	E	152	89.736	55.453	19.864	1.00	20.11	E
ATOM	5560	OD2	ASP	E	152	90.984	56.531	21.321	1.00	22.57	E
ATOM	5561	C	ASP	E	152	88.605	53.156	21.182	1.00	19.23	E
ATOM	5562	O	ASP	E	152	88.177	53.840	22.113	1.00	17.78	E
ATOM	5563	N	TRP	E	153	87.816	52.522	20.318	1.00	18.88	E
ATOM	5564	CA	TRP	E	153	86.356	52.566	20.391	1.00	18.61	E
ATOM	5565	CB	TRP	E	153	85.862	52.162	21.788	1.00	17.06	E
ATOM	5566	CG	TRP	E	153	86.084	50.690	22.085	1.00	17.90	E
ATOM	5567	CD2	TRP	E	153	85.165	49.612	21.830	1.00	18.84	E
ATOM	5568	CE2	TRP	E	153	85.804	48.414	22.222	1.00	16.88	E
ATOM	5569	CE3	TRP	E	153	83.862	49.544	21.308	1.00	18.29	E
ATOM	5570	CD1	TRP	E	153	87.209	50.114	22.604	1.00	16.70	E
ATOM	5571	NE1	TRP	E	153	87.049	48.747	22.688	1.00	17.49	E
ATOM	5572	CZ2	TRP	E	153	85.189	47.164	22.109	1.00	16.54	E
ATOM	5573	CZ3	TRP	E	153	83.250	48.303	21.196	1.00	17.19	E
ATOM	5574	CH2	TRP	E	153	83.917	47.129	21.597	1.00	17.24	E
ATOM	5575	C	TRP	E	153	85.732	53.887	19.975	1.00	18.97	E
ATOM	5576	O	TRP	E	153	84.696	54.300	20.508	1.00	18.70	E
ATOM	5577	N	THR	E	154	86.378	54.546	19.016	1.00	19.20	E
ATOM	5578	CA	THR	E	154	85.876	55.794	18.444	1.00	19.92	E
ATOM	5579	CB	THR	E	154	86.442	57.072	19.129	1.00	21.42	E
ATOM	5580	OG1	THR	E	154	87.865	57.129	18.958	1.00	19.26	E
ATOM	5581	CG2	THR	E	154	86.085	57.096	20.599	1.00	22.17	E
ATOM	5582	C	THR	E	154	86.314	55.835	16.992	1.00	18.66	E
ATOM	5583	O	THR	E	154	87.270	55.156	16.603	1.00	19.45	E
ATOM	5584	N	PHE	E	155	85.609	56.626	16.193	1.00	18.54	E
ATOM	5585	CA	PHE	E	155	85.940	56.784	14.779	1.00	19.04	E
ATOM	5586	CB	PHE	E	155	84.821	56.252	13.882	1.00	20.71	E
ATOM	5587	CG	PHE	E	155	84.524	54.794	14.060	1.00	23.03	E
ATOM	5588	CD1	PHE	E	155	83.492	54.375	14.898	1.00	23.94	E
ATOM	5589	CD2	PHE	E	155	85.255	53.837	13.365	1.00	23.32	E
ATOM	5590	CE1	PHE	E	155	83.189	53.017	15.037	1.00	23.82	E
ATOM	5591	CE2	PHE	E	155	84.962	52.476	13.497	1.00	24.46	E
ATOM	5592	CZ	PHE	E	155	83.930	52.068	14.333	1.00	24.51	E
ATOM	5593	C	PHE	E	155	86.109	58.265	14.459	1.00	19.30	E
ATOM	5594	O	PHE	E	155	85.791	59.134	15.275	1.00	19.12	E
ATOM	5595	N	GLN	E	156	86.613	58.550	13.265	1.00	17.46	E
ATOM	5596	CA	GLN	E	156	86.748	59.924	12.824	1.00	17.87	E
ATOM	5597	CB	GLN	E	156	88.081	60.546	13.264	1.00	19.74	E
ATOM	5598	CG	GLN	E	156	89.330	59.948	12.640	1.00	19.80	E
ATOM	5599	CD	GLN	E	156	90.551	60.785	12.950	1.00	21.46	E
ATOM	5600	OE1	GLN	E	156	90.660	61.928	12.503	1.00	21.30	E
ATOM	5601	NE2	GLN	E	156	91.469	60.230	13.734	1.00	21.38	E
ATOM	5602	C	GLN	E	156	86.629	59.989	11.316	1.00	17.47	E
ATOM	5603	O	GLN	E	156	86.856	58.999	10.616	1.00	17.25	E
ATOM	5604	N	ILE	E	157	86.252	61.159	10.823	1.00	17.46	E
ATOM	5605	CA	ILE	E	157	86.128	61.363	9.397	1.00	18.92	E
ATOM	5606	CB	ILE	E	157	84.746	60.922	8.898	1.00	19.57	E
ATOM	5607	CG2	ILE	E	157	83.659	61.774	9.545	1.00	15.09	E
ATOM	5608	CG1	ILE	E	157	84.704	60.994	7.369	1.00	21.06	E
ATOM	5609	CD1	ILE	E	157	83.541	60.218	6.756	1.00	22.57	E
ATOM	5610	C	ILE	E	157	86.349	62.837	9.083	1.00	20.28	E
ATOM	5611	O	ILE	E	157	85.887	63.712	9.808	1.00	20.70	E
ATOM	5612	N	LEU	E	158	87.094	63.104	8.019	1.00	21.79	E
ATOM	5613	CA	LEU	E	158	87.363	64.470	7.601	1.00	23.40	E
ATOM	5614	CB	LEU	E	158	88.869	64.706	7.466	1.00	25.42	E
ATOM	5615	CG	LEU	E	158	89.621	65.141	8.731	1.00	29.38	E
ATOM	5616	CD1	LEU	E	158	89.384	64.154	9.864	1.00	27.98	E
ATOM	5617	CD2	LEU	B	158	91.118	65.263	8.412	1.00	30.79	E
ATOM	5618	C	LEU	E	158	86.664	64.738	6.271	1.00	23.62	E
ATOM	5619	O	LEU	E	158	86.938	64.081	5.264	1.00	22.86	E

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ATOM	5620	N	VAL	E	159	85.747	65.702	6.290	1.00	22.98	E
ATOM	5621	CA	VAL	E	159	84.990	66.087	5.112	1.00	21.37	E
ATOM	5622	CB	VAL	E	159	83.476	66.104	5.417	1.00	20.53	E
ATOM	5623	CG1	VAL	E	159	82.684	66.407	4.149	1.00	14.20	E
ATOM	5624	CG2	VAL	E	159	83.058	64.756	6.002	1.00	15.86	E
ATOM	5625	C	VAL	E	159	85.468	67.469	4.710	1.00	22.21	E
ATOM	5626	O	VAL	E	159	85.253	68.444	5.423	1.00	22.87	E
ATOM	5627	N	MET	E	160	86.116	67.539	3.555	1.00	25.37	E
ATOM	5628	CA	MET	E	160	86.681	68.779	3.049	1.00	27.07	E
ATOM	5629	CB	MET	E	160	88.088	68.494	2.533	1.00	29.57	E
ATOM	5630	CG	MET	E	160	88.996	67.954	3.633	1.00	35.17	E
ATOM	5631	SD	MET	E	160	90.519	67.185	3.065	1.00	41.54	E
ATOM	5632	CE	MET	E	160	90.011	65.462	2.985	1.00	40.10	E
ATOM	5633	C	MET	E	160	85.848	69.466	1.979	1.00	28.93	E
ATOM	5634	O	MET	E	160	85.191	68.817	1.162	1.00	28.47	E
ATOM	5635	N	LEU	E	161	85.875	70.793	1.997	1.00	29.41	E
ATOM	5636	CA	LEU	E	161	85.123	71.574	1.031	1.00	31.54	E
ATOM	5637	CB	LEU	E	161	83.931	72.258	1.708	1.00	30.26	E
ATOM	5638	CG	LEU	E	161	83.183	73.297	0.860	1.00	30.70	E
ATOM	5639	CD1	LEU	E	161	82.515	72.618	-0.332	1.00	29.72	E
ATOM	5640	CD2	LEU	E	161	82.145	74.020	1.728	1.00	31.55	E
ATOM	5641	C	LEU	E	161	85.990	72.625	0.363	1.00	32.10	E
ATOM	5642	O	LEU	E	161	86.575	73.473	1.029	1.00	32.90	E
ATOM	5643	N	GLU	E	162	86.063	72.549	-0.960	1.00	35.11	E
ATOM	5644	CA	GLU	E	162	86.820	73.491	-1.771	1.00	38.40	E
ATOM	5645	CB	GLU	E	162	87.191	72.838	-3.105	1.00	42.17	E
ATOM	5646	CG	GLU	E	162	87.783	73.776	-4.148	1.00	48.21	E
ATOM	5647	CD	GLU	E	162	89.099	74.381	-3.711	1.00	52.47	E
ATOM	5648	OE1	GLU	E	162	90.006	73.611	-3.327	1.00	54.02	E
ATOM	5649	OE2	GLU	E	162	89.228	75.627	-3.759	1.00	56.21	E
ATOM	5650	C	GLU	E	162	85.892	74.673	-2.008	1.00	39.06	E
ATOM	5651	O	GLU	E	162	84.750	74.490	-2.422	1.00	39.27	E
ATOM	5652	N	MET	E	163	86.369	75.884	-1.747	1.00	40.73	E
ATOM	5653	CA	MET	E	163	85.520	77.049	-1.938	1.00	43.18	E
ATOM	5654	CB	MET	E	163	84.546	77.171	-0.761	1.00	45.15	E
ATOM	5655	CG	MET	E	163	85.155	76.900	0.612	1.00	47.55	E
ATOM	5656	SD	MET	E	163	86.318	78.152	1.185	1.00	52.18	E
ATOM	5657	CE	MET	E	163	85.186	79.345	1.941	1.00	50.37	E
ATOM	5658	C	MET	E	163	86.245	78.371	-2.151	1.00	43.77	E
ATOM	5659	O	MET	E	163	87.458	78.477	-1.953	1.00	41.87	E
ATOM	5660	N	THR	E	164	85.474	79.371	-2.571	1.00	45.83	E
ATOM	5661	CA	THR	E	164	85.981	80.714	-2.827	1.00	49.20	E
ATOM	5662	CB	THR	E	164	85.585	81.177	-4.241	1.00	50.11	E
ATOM	5663	OG1	THR	E	164	86.036	80.208	-5.199	1.00	49.28	E
ATOM	5664	CG2	THR	E	164	86.204	82.535	-4.559	1.00	50.19	E
ATOM	5665	C	THR	E	164	85.371	81.652	-1.785	1.00	51.14	E
ATOM	5666	O	THR	E	164	84.169	81.916	-1.802	1.00	50.64	E
ATOM	5667	N	PRO	E	165	86.198	82.170	-0.864	1.00	53.75	E
ATOM	5668	CD	PRO	E	165	87.667	82.057	-0.818	1.00	54.65	E
ATOM	5669	CA	PRO	E	165	85.719	83.072	0.185	1.00	56.16	E
ATOM	5670	CB	PRO	E	165	86.965	83.299	1.036	1.00	55.47	E
ATOM	5671	CG	PRO	E	165	88.057	83.262	0.019	1.00	55.93	E
ATOM	5672	C	PRO	E	165	85.098	84.381	-0.291	1.00	58.83	E
ATOM	5673	O	PRO	E	165	85.673	85.100	-1.112	1.00	58.35	E
ATOM	5674	N	GLN	E	166	83.912	84.666	0.239	1.00	61.77	E
ATOM	5675	CA	GLN	E	166	83.173	85.885	-0.065	1.00	63.96	E
ATOM	5676	CB	GLN	E	166	82.103	85.616	-1.123	1.00	64.28	E
ATOM	5677	CG	GLN	E	166	82.662	85.236	-2.481	1.00	66.42	E
ATOM	5678	CD	GLN	E	166	81.643	85.392	-3.596	1.00	67.38	E
ATOM	5679	OE1	GLN	E	166	81.937	85.124	-4.761	1.00	68.28	E
ATOM	5680	NE2	GLN	E	166	80.437	85.832	-3.244	1.00	66.50	E
ATOM	5681	C	GLN	E	166	82.521	86.396	1.223	1.00	65.40	E
ATOM	5682	O	GLN	E	166	81.974	85.614	2.007	1.00	65.65	E
ATOM	5683	N	ARG	E	167	82.589	87.707	1.444	1.00	65.80	E
ATOM	5684	CA	ARG	E	167	82.017	88.302	2.647	1.00	65.27	E
ATOM	5685	CB	ARG	E	167	82.353	89.795	2.706	1.00	67.87	E
ATOM	5686	CG	ARG	E	167	82.221	90.423	4.095	1.00	70.91	E
ATOM	5687	CD	ARG	E	167	83.216	89.813	5.085	1.00	73.36	E
ATOM	5688	NE	ARG	E	167	83.244	90.532	6.359	1.00	75.19	E
ATOM	5689	CZ	ARG	E	167	84.012	90.199	7.394	1.00	75.48	E
ATOM	5690	NH1	ARG	E	167	84.824	89.151	7.318	1.00	75.50	E
ATOM	5691	NH2	ARG	E	167	83.968	90.916	8.509	1.00	75.83	E
ATOM	5692	C	ARG	E	167	80.504	88.100	2.684	1.00	63.81	E
ATOM	5693	O	ARG	E	167	79.816	88.254	1.672	1.00	62.94	E

ATOM	5694	N	GLY E 168	79.991	87.751	3.860	1.00 61.88	E
ATOM	5695	CA	GLY E 168	78.567	87.519	4.004	1.00 58.78	E
ATOM	5696	C	GLY E 168	78.243	86.036	3.959	1.00 57.24	E
ATOM	5697	O	GLY E 168	77.262	85.594	4.558	1.00 57.26	E
ATOM	5698	N	ASP E 169	79.066	85.263	3.249	1.00 54.67	E
ATOM	5699	CA	ASP E 169	78.849	83.823	3.140	1.00 52.07	E
ATOM	5700	CB	ASP E 169	79.799	83.186	2.116	1.00 52.03	E
ATOM	5701	CG	ASP E 169	79.329	83.359	0.683	1.00 52.57	E
ATOM	5702	OD1	ASP E 169	78.105	83.453	0.457	1.00 51.86	E
ATOM	5703	OD2	ASP E 169	80.188	83.376	-0.223	1.00 52.34	E
ATOM	5704	C	ASP E 169	79.027	83.096	4.463	1.00 49.54	E
ATOM	5705	O	ASP E 169	79.993	83.322	5.196	1.00 49.84	E
ATOM	5706	N	VAL E 170	78.082	82.214	4.758	1.00 46.54	E
ATOM	5707	CA	VAL E 170	78.136	81.418	5.970	1.00 43.15	E
ATOM	5708	CB	VAL E 170	76.903	81.669	6.871	1.00 42.70	E
ATOM	5709	CG1	VAL E 170	76.997	80.819	8.138	1.00 41.36	E
ATOM	5710	CG2	VAL E 170	76.814	83.146	7.227	1.00 41.14	E
ATOM	5711	C	VAL E 170	78.172	79.948	5.555	1.00 41.66	E
ATOM	5712	O	VAL E 170	77.216	79.432	4.972	1.00 40.25	E
ATOM	5713	N	TYR E 171	79.289	79.287	5.833	1.00 39.16	E
ATOM	5714	CA	TYR E 171	79.438	77.877	5.502	1.00 38.16	E
ATOM	5715	CB	TYR E 171	80.836	77.617	4.953	1.00 38.66	E
ATOM	5716	CG	TYR E 171	81.035	78.237	3.598	1.00 38.98	E
ATOM	5717	CD1	TYR E 171	80.740	77.522	2.440	1.00 38.79	E
ATOM	5718	CE1	TYR E 171	80.852	78.105	1.186	1.00 40.42	E
ATOM	5719	CD2	TYR E 171	81.451	79.561	3.471	1.00 38.62	E
ATOM	5720	CE2	TYR E 171	81.565	80.160	2.219	1.00 40.32	E
ATOM	5721	CZ	TYR E 171	81.262	79.424	1.079	1.00 41.26	E
ATOM	5722	OH	TYR E 171	81.350	80.004	-0.166	1.00 42.98	E
ATOM	5723	C	TYR E 171	79.206	77.076	6.764	1.00 37.15	E
ATOM	5724	O	TYR E 171	79.755	77.398	7.813	1.00 37.94	E
ATOM	5725	N	THR E 172	78.384	76.037	6.672	1.00 35.12	E
ATOM	5726	CA	THR E 172	78.091	75.229	7.842	1.00 34.42	E
ATOM	5727	CB	THR E 172	76.654	75.496	8.367	1.00 35.21	E
ATOM	5728	OG1	THR E 172	76.184	74.351	9.094	1.00 35.96	E
ATOM	5729	CG2	THR E 172	75.706	75.790	7.226	1.00 38.35	E
ATOM	5730	C	THR E 172	78.263	73.734	7.638	1.00 32.90	E
ATOM	5731	O	THR E 172	77.875	73.188	6.604	1.00 31.57	E
ATOM	5732	N	CYS E 173	78.858	73.090	8.643	1.00 30.59	E
ATOM	5733	CA	CYS E 173	79.078	71.646	8.640	1.00 29.35	E
ATOM	5734	C	CYS E 173	77.923	71.058	9.454	1.00 29.72	E
ATOM	5735	O	CYS E 173	77.771	71.337	10.645	1.00 28.89	E
ATOM	5736	CB	CYS E 173	80.424	71.299	9.287	1.00 27.53	E
ATOM	5737	SG	CYS E 173	80.875	69.541	9.133	1.00 27.81	E
ATOM	5738	N	HIS E 174	77.109	70.251	8.788	1.00 28.95	E
ATOM	5739	CA	HIS E 174	75.925	69.642	9.381	1.00 28.54	E
ATOM	5740	CB	HIS E 174	74.770	69.881	8.399	1.00 29.66	E
ATOM	5741	CG	HIS E 174	73.457	69.311	8.823	1.00 30.98	E
ATOM	5742	CD2	HIS E 174	72.367	69.899	9.369	1.00 31.91	E
ATOM	5743	ND1	HIS E 174	73.124	67.988	8.630	1.00 31.68	E
ATOM	5744	CE1	HIS E 174	71.883	67.785	9.034	1.00 33.26	E
ATOM	5745	NE2	HIS E 174	71.401	68.929	9.487	1.00 34.66	E
ATOM	5746	C	HIS E 174	76.173	68.151	9.650	1.00 27.83	E
ATOM	5747	O	HIS E 174	76.438	67.375	8.728	1.00 27.35	E
ATOM	5748	N	VAL E 175	76.085	67.753	10.917	1.00 26.27	E
ATOM	5749	CA	VAL E 175	76.349	66.365	11.284	1.00 26.34	E
ATOM	5750	CB	VAL E 175	77.584	66.281	12.215	1.00 23.90	E
ATOM	5751	CG1	VAL E 175	77.807	64.850	12.663	1.00 19.67	E
ATOM	5752	CG2	VAL E 175	78.818	66.813	11.491	1.00 19.93	E
ATOM	5753	C	VAL E 175	75.199	65.603	11.938	1.00 27.67	E
ATOM	5754	O	VAL E 175	74.587	66.064	12.904	1.00 26.77	E
ATOM	5755	N	GLU E 176	74.917	64.423	11.399	1.00 29.83	E
ATOM	5756	CA	GLU E 176	73.864	63.564	11.929	1.00 32.99	E
ATOM	5757	CB	GLU E 176	72.842	63.231	10.839	1.00 34.86	E
ATOM	5758	CG	GLU E 176	72.076	64.441	10.319	1.00 40.13	E
ATOM	5759	CD	GLU E 176	71.204	64.107	9.124	1.00 44.38	E
ATOM	5760	OE1	GLU E 176	70.292	63.265	9.269	1.00 46.31	E
ATOM	5761	OE2	GLU E 176	71.433	64.682	8.037	1.00 47.49	E
ATOM	5762	C	GLU E 176	74.526	62.289	12.445	1.00 32.24	E
ATOM	5763	O	GLU E 176	75.296	61.646	11.734	1.00 32.81	E
ATOM	5764	N	HIS E 177	74.220	61.934	13.686	1.00 31.66	E
ATOM	5765	CA	HIS E 177	74.803	60.761	14.311	1.00 30.50	E
ATOM	5766	CB	HIS E 177	76.147	61.161	14.927	1.00 29.59	E
ATOM	5767	CG	HIS E 177	76.871	60.034	15.582	1.00 28.23	E

ATOM	5768	CD2	HIS	E	177	77.752	59.134	15.086	1.00	28.22	E
ATOM	5769	ND1	HIS	E	177	76.679	59.698	16.903	1.00	27.71	E
ATOM	5770	CE1	HIS	E	177	77.410	58.636	17.194	1.00	29.83	E
ATOM	5771	NE2	HIS	E	177	78.070	58.274	16.108	1.00	29.78	E
ATOM	5772	C	HIS	E	177	73.854	60.195	15.373	1.00	30.09	E
ATOM	5773	O	HIS	E	177	73.189	60.942	16.083	1.00	29.91	E
ATOM	5774	N	PRO	E	178	73.781	58.862	15.496	1.00	31.45	E
ATOM	5775	CD	PRO	E	178	74.485	57.842	14.697	1.00	31.00	E
ATOM	5776	CA	PRO	E	178	72.898	58.226	16.481	1.00	31.44	E
ATOM	5777	CB	PRO	E	178	73.370	56.779	16.467	1.00	30.89	E
ATOM	5778	CG	PRO	E	178	73.704	56.578	15.028	1.00	31.16	E
ATOM	5779	C	PRO	E	178	72.896	58.826	17.893	1.00	31.78	E
ATOM	5780	O	PRO	E	178	71.903	58.727	18.611	1.00	32.84	E
ATOM	5781	N	SER	E	179	73.996	59.448	18.292	1.00	30.31	E
ATOM	5782	CA	SER	E	179	74.087	60.039	19.624	1.00	30.84	E
ATOM	5783	CB	SER	E	179	75.552	60.155	20.038	1.00	29.11	E
ATOM	5784	OG	SER	E	179	76.240	61.049	19.176	1.00	24.79	E
ATOM	5785	C	SER	E	179	73.452	61.424	19.717	1.00	32.75	E
ATOM	5786	O	SER	E	179	73.330	61.982	20.804	1.00	32.78	E
ATOM	5787	N	LEU	E	180	73.046	61.981	18.583	1.00	35.18	E
ATOM	5788	CA	LEU	E	180	72.477	63.317	18.578	1.00	37.31	E
ATOM	5789	CB	LEU	E	180	73.098	64.132	17.448	1.00	35.77	E
ATOM	5790	CG	LEU	E	180	74.610	64.337	17.528	1.00	36.46	E
ATOM	5791	CD1	LEU	E	180	75.097	65.018	16.259	1.00	35.16	E
ATOM	5792	CD2	LEU	E	180	74.948	65.167	18.752	1.00	34.58	E
ATOM	5793	C	LEU	E	180	70.967	63.405	18.463	1.00	40.35	E
ATOM	5794	O	LEU	E	180	70.386	63.003	17.456	1.00	40.67	E
ATOM	5795	N	GLN	E	181	70.338	63.943	19.503	1.00	42.97	E
ATOM	5796	CA	GLN	E	181	68.895	64.141	19.504	1.00	45.09	E
ATOM	5797	CB	GLN	E	181	68.466	64.877	20.776	1.00	46.73	E
ATOM	5798	CG	GLN	E	181	69.471	65.931	21.235	1.00	49.84	E
ATOM	5799	CD	GLN	E	181	68.898	66.904	22.256	1.00	52.17	E
ATOM	5800	OE1	GLN	E	181	68.074	67.760	21.920	1.00	52.91	E
ATOM	5801	NE2	GLN	E	181	69.329	66.774	23.510	1.00	51.73	E
ATOM	5802	C	GLN	E	181	68.607	65.002	18.277	1.00	45.26	E
ATOM	5803	O	GLN	E	181	67.660	64.752	17.530	1.00	46.25	E
ATOM	5804	N	SER	E	182	69.448	66.013	18.078	1.00	44.33	E
ATOM	5805	CA	SER	E	182	69.335	66.923	16.943	1.00	42.52	E
ATOM	5806	CB	SER	E	182	68.819	68.291	17.401	1.00	43.41	E
ATOM	5807	OG	SER	E	182	69.658	68.853	18.396	1.00	43.07	E
ATOM	5808	C	SER	E	182	70.725	67.068	16.337	1.00	41.70	E
ATOM	5809	O	SER	E	182	71.726	66.955	17.040	1.00	39.94	E
ATOM	5810	N	PRO	E	183	70.805	67.330	15.023	1.00	41.57	E
ATOM	5811	CD	PRO	E	183	69.680	67.554	14.098	1.00	41.72	E
ATOM	5812	CA	PRO	E	183	72.087	67.485	14.326	1.00	40.68	E
ATOM	5813	CB	PRO	E	183	71.669	67.638	12.865	1.00	40.95	E
ATOM	5814	CG	PRO	E	183	70.344	68.309	12.965	1.00	42.76	E
ATOM	5815	C	PRO	E	183	72.988	68.628	14.790	1.00	38.81	E
ATOM	5816	O	PRO	E	183	72.520	69.709	15.142	1.00	39.64	E
ATOM	5817	N	ILE	E	184	74.291	68.370	14.785	1.00	37.31	E
ATOM	5818	CA	ILE	E	184	75.270	69.368	15.177	1.00	34.30	E
ATOM	5819	CB	ILE	E	184	76.570	68.728	15.699	1.00	33.43	E
ATOM	5820	CG2	ILE	E	184	77.671	69.779	15.766	1.00	32.87	E
ATOM	5821	CG1	ILE	E	184	76.337	68.112	17.076	1.00	33.53	E
ATOM	5822	CD1	ILE	E	184	77.530	67.339	17.604	1.00	33.29	E
ATOM	5823	C	ILE	E	184	75.625	70.216	13.974	1.00	33.68	E
ATOM	5824	O	ILE	E	184	75.851	69.704	12.882	1.00	33.87	E
ATOM	5825	N	THR	E	185	75.676	71.521	14.181	1.00	34.19	E
ATOM	5826	CA	THR	E	185	76.018	72.431	13.111	1.00	33.39	E
ATOM	5827	CB	THR	E	185	74.792	73.230	12.637	1.00	33.77	E
ATOM	5828	OG1	THR	E	185	74.211	73.918	13.751	1.00	33.46	E
ATOM	5829	CG2	THR	E	185	73.758	72.297	12.016	1.00	33.35	E
ATOM	5830	C	THR	E	185	77.081	73.396	13.590	1.00	33.01	E
ATOM	5831	O	THR	E	185	76.990	73.966	14.679	1.00	33.25	E
ATOM	5832	N	VAL	E	186	78.106	73.552	12.770	1.00	32.85	E
ATOM	5833	CA	VAL	E	186	79.197	74.453	13.067	1.00	32.84	E
ATOM	5834	CB	VAL	E	186	80.503	73.684	13.300	1.00	31.58	E
ATOM	5835	CG1	VAL	E	186	81.629	74.651	13.611	1.00	30.07	E
ATOM	5836	CG2	VAL	E	186	80.316	72.697	14.441	1.00	30.84	E
ATOM	5837	C	VAL	E	186	79.329	75.317	11.836	1.00	34.14	E
ATOM	5838	O	VAL	E	186	79.403	74.812	10.719	1.00	33.50	E
ATOM	5839	N	GLU	E	187	79.329	76.626	12.029	1.00	38.05	E
ATOM	5840	CA	GLU	E	187	79.453	77.522	10.898	1.00	40.60	E
ATOM	5841	CB	GLU	E	187	78.358	78.592	10.934	1.00	43.36	E

ATOM	5842	CG	GLU	E	187	78.426	79.531	12.121	1.00	47.46	E
ATOM	5843	CD	GLU	E	187	77.657	80.822	11.886	1.00	51.49	E
ATOM	5844	OE1	GLU	E	187	76.452	80.752	11.551	1.00	52.89	E
ATOM	5845	OE2	GLU	E	187	78.262	81.908	12.039	1.00	53.48	E
ATOM	5846	C	GLU	E	187	80.819	78.182	10.877	1.00	40.49	E
ATOM	5847	O	GLU	E	187	81.496	78.285	11.901	1.00	40.26	E
ATOM	5848	N	TRP	E	188	81.221	78.610	9.688	1.00	41.52	E
ATOM	5849	CA	TRP	E	188	82.492	79.284	9.488	1.00	43.59	E
ATOM	5850	CB	TRP	E	188	83.498	78.337	8.834	1.00	41.24	E
ATOM	5851	CG	TRP	E	188	84.852	78.942	8.675	1.00	41.34	E
ATOM	5852	CD2	TRP	E	188	85.327	79.672	7.543	1.00	40.23	E
ATOM	5853	CE2	TRP	E	188	86.642	80.090	7.838	1.00	41.87	E
ATOM	5854	CE3	TRP	E	188	84.768	80.015	6.305	1.00	40.90	E
ATOM	5855	CD1	TRP	E	188	85.867	78.945	9.588	1.00	41.88	E
ATOM	5856	NE1	TRP	E	188	86.947	79.632	9.093	1.00	41.99	E
ATOM	5857	CZ2	TRP	E	188	87.411	80.835	6.938	1.00	42.93	E
ATOM	5858	CZ3	TRP	E	188	85.531	80.757	5.408	1.00	42.58	E
ATOM	5859	CH2	TRP	E	188	86.839	81.159	5.731	1.00	43.65	E
ATOM	5860	C	TRP	E	188	82.198	80.467	8.566	1.00	46.04	E
ATOM	5861	O	TRP	E	188	81.335	80.374	7.688	1.00	45.30	E
ATOM	5862	N	ARG	E	189	82.899	81.579	8.765	1.00	50.26	E
ATOM	5863	CA	ARG	E	189	82.673	82.761	7.936	1.00	54.31	E
ATOM	5864	CB	ARG	E	189	81.980	83.855	8.755	1.00	56.19	E
ATOM	5865	CG	ARG	E	189	82.820	84.460	9.880	1.00	59.58	E
ATOM	5866	CD	ARG	E	189	83.030	83.499	11.045	1.00	63.51	E
ATOM	5867	NE	ARG	E	189	83.580	84.180	12.218	1.00	66.73	E
ATOM	5868	CZ	ARG	E	189	84.771	84.771	12.255	1.00	68.44	E
ATOM	5869	NH1	ARG	E	189	85.553	84.766	11.183	1.00	69.41	E
ATOM	5870	NH2	ARG	E	189	85.178	85.378	13.363	1.00	70.13	E
ATOM	5871	C	ARG	E	189	83.950	83.322	7.313	1.00	55.74	E
ATOM	5872	O	ARG	E	189	85.043	83.182	7.866	1.00	56.16	E
ATOM	5873	N	ALA	E	190	83.796	83.962	6.156	1.00	58.53	E
ATOM	5874	CA	ALA	E	190	84.920	84.557	5.435	1.00	60.08	E
ATOM	5875	CB	ALA	E	190	84.550	84.734	3.964	1.00	59.97	E
ATOM	5876	C	ALA	E	190	85.335	85.905	6.036	1.00	61.01	E
ATOM	5877	O	ALA	E	190	84.654	86.378	6.971	1.00	62.25	E
ATOM	5878	OXT	ALA	E	190	86.338	86.479	5.558	1.00	61.85	E
ATOM	5879	C	LEU	F	1	78.718	38.094	33.366	1.00	32.03	F
ATOM	5880	O	LEU	F	1	79.818	38.571	33.658	1.00	30.77	F
ATOM	5881	N	LEU	F	1	76.219	38.100	33.307	1.00	33.21	F
ATOM	5882	CA	LEU	F	1	77.432	38.678	33.953	1.00	32.59	F
ATOM	5883	N	GLN	F	2	78.578	37.069	32.531	1.00	30.39	F
ATOM	5884	CA	GLN	F	2	79.744	36.436	31.936	1.00	28.84	F
ATOM	5885	C	GLN	F	2	79.609	36.081	30.462	1.00	27.93	F
ATOM	5886	O	GLN	F	2	78.741	35.308	30.067	1.00	27.68	F
ATOM	5887	N	PRO	F	3	80.463	36.663	29.619	1.00	28.02	F
ATOM	5888	CD	PRO	F	3	81.461	37.720	29.856	1.00	28.68	F
ATOM	5889	CA	PRO	F	3	80.370	36.332	28.198	1.00	27.76	F
ATOM	5890	CB	PRO	F	3	81.363	37.298	27.552	1.00	28.01	F
ATOM	5891	CG	PRO	F	3	82.353	37.575	28.660	1.00	28.41	F
ATOM	5892	C	PRO	F	3	80.774	34.872	28.030	1.00	27.24	F
ATOM	5893	O	PRO	F	3	81.698	34.406	28.698	1.00	27.18	F
ATOM	5894	N	PHE	F	4	80.082	34.144	27.159	1.00	25.22	F
ATOM	5895	CA	PHE	F	4	80.409	32.738	26.943	1.00	24.75	F
ATOM	5896	CB	PHE	F	4	79.135	31.905	26.849	1.00	25.85	F
ATOM	5897	CG	PHE	F	4	79.272	30.539	27.446	1.00	31.58	F
ATOM	5898	CD1	PHE	F	4	79.435	30.384	28.823	1.00	33.24	F
ATOM	5899	CD2	PHE	F	4	79.241	29.404	26.634	1.00	32.15	F
ATOM	5900	CE1	PHE	F	4	79.561	29.116	29.386	1.00	33.28	F
ATOM	5901	CE2	PHE	F	4	79.364	28.136	27.187	1.00	33.29	F
ATOM	5902	CZ	PHE	F	4	79.524	27.989	28.565	1.00	34.18	F
ATOM	5903	C	PHE	F	4	81.227	32.588	25.664	1.00	22.43	F
ATOM	5904	O	PHE	F	4	80.759	32.919	24.586	1.00	24.59	F
ATOM	5905	N	PRO	F	5	82.460	32.065	25.771	1.00	22.79	F
ATOM	5906	CD	PRO	F	5	83.191	31.820	27.029	1.00	21.18	F
ATOM	5907	CA	PRO	F	5	83.349	31.882	24.618	1.00	21.18	F
ATOM	5908	CB	PRO	F	5	84.715	32.140	25.218	1.00	20.19	F
ATOM	5909	CG	PRO	F	5	84.587	31.450	26.544	1.00	20.99	F
ATOM	5910	C	PRO	F	5	83.291	30.524	23.949	1.00	20.28	F
ATOM	5911	O	PRO	F	5	82.796	29.559	24.521	1.00	19.48	F
ATOM	5912	N	GLN	F	6	83.818	30.456	22.730	1.00	21.24	F
ATOM	5913	CA	GLN	F	6	83.848	29.200	21.983	1.00	19.98	F
ATOM	5914	CB	GLN	F	6	83.665	29.450	20.484	1.00	18.71	F
ATOM	5915	CG	GLN	F	6	82.312	30.010	20.048	1.00	18.35	F

ATOM	5916	CD	GLN	F	6	82.255	30.247	18.537	1.00	22.29	F
ATOM	5917	OE1	GLN	F	6	82.612	29.368	17.740	1.00	21.53	F
ATOM	5918	NE2	GLN	F	6	81.802	31.429	18.138	1.00	20.02	F
ATOM	5919	C	GLN	F	6	85.213	28.548	22.213	1.00	20.47	F
ATOM	5920	O	GLN	F	6	86.243	29.204	22.099	1.00	18.48	F
ATOM	5921	N	PRO	F	7	85.229	27.256	22.575	1.00	21.16	F
ATOM	5922	CD	PRO	F	7	84.071	26.494	23.084	1.00	20.59	F
ATOM	5923	CA	PRO	F	7	86.471	26.520	22.813	1.00	21.61	F
ATOM	5924	CB	PRO	F	7	86.037	25.444	23.797	1.00	23.40	F
ATOM	5925	CG	PRO	F	7	84.649	25.123	23.311	1.00	19.67	F
ATOM	5926	C	PRO	F	7	86.996	25.897	21.521	1.00	23.00	F
ATOM	5927	O	PRO	F	7	86.219	25.601	20.610	1.00	23.19	F
ATOM	5928	N	GLU	F	8	88.312	25.714	21.438	1.00	21.78	F
ATOM	5929	CA	GLU	F	8	88.904	25.068	20.279	1.00	23.12	F
ATOM	5930	CB	GLU	F	8	90.297	25.632	19.968	1.00	24.50	F
ATOM	5931	CG	GLU	F	8	91.086	24.834	18.915	1.00	26.16	F
ATOM	5932	CD	GLU	F	8	90.360	24.697	17.576	1.00	31.57	F
ATOM	5933	OE1	GLU	F	8	89.250	24.114	17.540	1.00	33.65	F
ATOM	5934	OE2	GLU	F	8	90.903	25.171	16.555	1.00	30.66	F
ATOM	5935	C	GLU	F	8	89.005	23.608	20.680	1.00	22.95	F
ATOM	5936	O	GLU	F	8	89.289	23.292	21.833	1.00	23.25	F
ATOM	5937	N	LEU	F	9	88.756	22.712	19.741	1.00	24.74	F
ATOM	5938	CA	LEU	F	9	88.815	21.292	20.047	1.00	27.30	F
ATOM	5939	CB	LEU	F	9	87.729	20.549	19.272	1.00	25.73	F
ATOM	5940	CG	LEU	F	9	86.302	21.051	19.494	1.00	29.20	F
ATOM	5941	CD1	LEU	F	9	85.338	20.235	18.645	1.00	28.18	F
ATOM	5942	CD2	LEU	F	9	85.938	20.943	20.967	1.00	29.61	F
ATOM	5943	C	LEU	F	9	90.178	20.707	19.712	1.00	28.17	F
ATOM	5944	O	LEU	F	9	90.715	20.940	18.631	1.00	26.94	F
ATOM	5945	N	PRO	F	10	90.765	19.947	20.647	1.00	30.38	F
ATOM	5946	CD	PRO	F	10	90.365	19.707	22.044	1.00	30.47	F
ATOM	5947	CA	PRO	F	10	92.076	19.355	20.370	1.00	34.24	F
ATOM	5948	CB	PRO	F	10	92.556	18.915	21.752	1.00	32.97	F
ATOM	5949	CG	PRO	F	10	91.282	18.561	22.448	1.00	31.98	F
ATOM	5950	C	PRO	F	10	91.985	18.188	19.393	1.00	35.94	F
ATOM	5951	O	PRO	F	10	90.993	17.461	19.376	1.00	38.70	F
ATOM	5952	N	TYR	F	11	93.016	18.031	18.570	1.00	37.40	F
ATOM	5953	CA	TYR	F	11	93.075	16.936	17.609	1.00	38.84	F
ATOM	5954	CB	TYR	F	11	92.126	17.176	16.434	1.00	38.73	F
ATOM	5955	CG	TYR	F	11	92.017	15.969	15.539	1.00	39.56	F
ATOM	5956	CD1	TYR	F	11	91.294	14.848	15.942	1.00	39.88	F
ATOM	5957	CE1	TYR	F	11	91.254	13.697	15.164	1.00	39.49	F
ATOM	5958	CD2	TYR	F	11	92.698	15.913	14.327	1.00	39.73	F
ATOM	5959	CE2	TYR	F	11	92.668	14.765	13.537	1.00	40.44	F
ATOM	5960	CZ	TYR	F	11	91.945	13.659	13.964	1.00	40.29	F
ATOM	5961	OH	TYR	F	11	91.921	12.514	13.200	1.00	40.03	F
ATOM	5962	C	TYR	F	11	94.498	16.781	17.077	1.00	40.23	F
ATOM	5963	O	TYR	F	11	95.102	15.708	17.300	1.00	41.88	F
ATOM	5964	OXT	TYR	F	11	94.988	17.742	16.443	1.00	40.58	F
ATOM	5965	O	HOH	H	1	37.560	11.197	17.272	1.00	17.47	H
ATOM	5966	O	HOH	H	2	81.295	26.543	20.573	1.00	15.95	H
ATOM	5967	O	HOH	H	3	43.884	23.627	16.726	1.00	14.83	H
ATOM	5968	O	HOH	H	4	89.230	61.015	16.512	1.00	19.10	H
ATOM	5969	O	HOH	H	5	92.090	40.877	18.768	1.00	15.59	H
ATOM	5970	O	HOH	H	6	57.686	14.054	4.407	1.00	20.02	H
ATOM	5971	O	HOH	H	7	87.607	31.423	22.217	1.00	11.29	H
ATOM	5972	O	HOH	H	8	31.815	41.479	5.673	1.00	23.91	H
ATOM	5973	O	HOH	H	9	46.112	3.594	18.714	1.00	20.15	H
ATOM	5974	O	HOH	H	10	86.724	67.786	15.551	1.00	22.39	H
ATOM	5975	O	HOH	H	11	42.599	14.833	17.213	1.00	16.12	H
ATOM	5976	O	HOH	H	12	93.679	37.081	11.737	1.00	15.03	H
ATOM	5977	O	HOH	H	13	50.288	0.581	25.262	1.00	13.69	H
ATOM	5978	O	HOH	H	14	96.256	37.853	25.291	1.00	12.90	H
ATOM	5979	O	HOH	H	15	90.711	30.936	37.307	1.00	31.88	H
ATOM	5980	O	HOH	H	16	80.045	39.846	25.144	1.00	33.11	H
ATOM	5981	O	HOH	H	17	80.708	45.662	11.514	1.00	41.56	H
ATOM	5982	O	HOH	H	18	42.215	0.119	11.193	1.00	15.83	H
ATOM	5983	O	HOH	H	19	95.828	50.485	5.930	1.00	27.67	H
ATOM	5984	O	HOH	H	20	48.809	37.278	14.928	1.00	36.10	H
ATOM	5985	O	HOH	H	21	47.553	-0.403	11.823	1.00	14.62	H
ATOM	5986	O	HOH	H	22	94.554	76.132	19.122	1.00	83.80	H
ATOM	5987	O	HOH	H	23	83.295	48.460	17.328	1.00	17.64	H
ATOM	5988	O	HOH	H	24	88.976	42.102	7.818	1.00	26.11	H
ATOM	5989	O	HOH	H	25	99.041	56.322	24.823	1.00	24.86	H

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ATOM	5990	O	HOH	H	26	47.640	0.006	20.312	1.00	18.95	H
ATOM	5991	O	HOH	H	27	46.987	29.359	11.916	1.00	21.84	H
ATOM	5992	O	HOH	H	28	88.283	37.229	11.279	1.00	21.34	H
ATOM	5993	O	HOH	H	29	49.878	-9.043	36.424	1.00	32.47	H
ATOM	5994	O	HOH	H	30	82.777	39.366	24.935	1.00	24.79	H
ATOM	5995	O	HOH	H	31	72.919	25.704	15.123	1.00	18.09	H
ATOM	5996	O	HOH	H	32	86.830	25.153	13.558	1.00	24.14	H
ATOM	5997	O	HOH	H	33	43.152	5.651	13.774	1.00	19.96	H
ATOM	5998	O	HOH	H	34	100.654	27.732	5.367	1.00	34.73	H
ATOM	5999	O	HOH	H	35	48.550	32.122	26.894	1.00	20.17	H
ATOM	6000	O	HOH	H	36	78.728	36.578	6.822	1.00	32.92	H
ATOM	6001	O	HOH	H	37	89.361	11.980	24.953	1.00	51.75	H
ATOM	6002	O	HOH	H	38	90.411	24.657	31.926	1.00	28.29	H
ATOM	6003	O	HOH	H	39	80.690	24.233	8.462	1.00	22.43	H
ATOM	6004	O	HOH	H	40	83.769	65.973	-5.489	1.00	21.06	H
ATOM	6005	O	HOH	H	41	87.710	34.692	7.008	1.00	22.47	H
ATOM	6006	O	HOH	H	42	38.997	4.521	15.299	1.00	25.36	H
ATOM	6007	O	HOH	H	43	94.223	46.644	24.674	1.00	32.67	H
ATOM	6008	O	HOH	H	44	35.150	15.757	26.294	1.00	29.03	H
ATOM	6009	O	HOH	H	45	85.059	24.652	18.280	1.00	25.63	H
ATOM	6010	O	HOH	H	46	67.739	6.320	18.991	1.00	43.67	H
ATOM	6011	O	HOH	H	47	92.376	63.977	12.866	1.00	32.46	H
ATOM	6012	O	HOH	H	48	91.526	49.479	22.504	1.00	29.70	H
ATOM	6013	O	HOH	H	49	56.333	-2.088	24.733	1.00	28.53	H
ATOM	6014	O	HOH	H	50	100.482	53.937	3.942	1.00	52.26	H
ATOM	6015	O	HOH	H	51	48.244	18.753	22.918	1.00	44.88	H
ATOM	6016	O	HOH	H	52	32.577	-0.558	6.769	1.00	33.70	H
ATOM	6017	O	HOH	H	53	47.162	26.527	12.972	1.00	29.72	H
ATOM	6018	O	HOH	H	54	98.621	66.834	5.100	1.00	52.20	H
ATOM	6019	O	HOH	H	55	88.106	52.134	17.293	1.00	21.13	H
ATOM	6020	O	HOH	H	56	59.655	31.307	17.069	1.00	25.89	H
ATOM	6021	O	HOH	H	57	73.562	24.323	12.997	1.00	23.51	H
ATOM	6022	O	HOH	H	58	43.748	32.725	20.165	1.00	52.72	H
ATOM	6023	O	HOH	H	59	26.392	-7.072	11.400	1.00	26.20	H
ATOM	6024	O	HOH	H	60	83.955	73.751	16.805	1.00	18.19	H
ATOM	6025	O	HOH	H	61	46.229	-19.766	10.675	1.00	28.79	H
ATOM	6026	O	HOH	H	62	52.436	38.720	16.630	1.00	28.35	H
ATOM	6027	O	HOH	H	63	60.555	9.392	19.914	1.00	28.43	H
ATOM	6028	O	HOH	H	64	62.105	2.197	11.948	1.00	33.33	H
ATOM	6029	O	HOH	H	65	40.514	-12.059	13.631	1.00	21.32	H
ATOM	6030	O	HOH	H	66	65.876	23.972	14.155	1.00	21.11	H
ATOM	6031	O	HOH	H	67	84.702	18.013	5.666	1.00	19.12	H
ATOM	6032	O	HOH	H	68	64.715	11.655	15.936	1.00	28.72	H
ATOM	6033	O	HOH	H	69	85.418	74.949	14.820	1.00	27.90	H
ATOM	6034	O	HOH	H	70	77.974	25.419	23.038	1.00	42.15	H
ATOM	6035	O	HOH	H	71	65.805	8.484	20.741	1.00	44.01	H
ATOM	6036	O	HOH	H	72	51.276	26.045	10.800	1.00	28.36	H
ATOM	6037	O	HOH	H	73	65.226	22.195	25.831	1.00	36.11	H
ATOM	6038	O	HOH	H	74	101.567	46.068	1.107	1.00	53.81	H
ATOM	6039	O	HOH	H	75	32.615	31.234	1.517	1.00	21.03	H
ATOM	6040	O	HOH	H	76	42.100	-0.001	13.802	1.00	23.44	H
ATOM	6041	O	HOH	H	77	35.124	40.614	14.668	1.00	27.61	H
ATOM	6042	O	HOH	H	78	92.548	46.813	7.595	1.00	31.64	H
ATOM	6043	O	HOH	H	79	34.670	13.941	14.778	1.00	22.87	H
ATOM	6044	O	HOH	H	80	98.527	27.671	28.270	1.00	42.07	H
ATOM	6045	O	HOH	H	81	30.588	36.032	16.540	1.00	37.52	H
ATOM	6046	O	HOH	H	82	89.345	42.957	13.940	1.00	22.73	H
ATOM	6047	O	HOH	H	83	92.891	18.085	10.698	1.00	32.35	H
ATOM	6048	O	HOH	H	84	90.050	48.556	16.519	1.00	27.30	H
ATOM	6049	O	HOH	H	85	110.812	49.549	15.813	1.00	27.68	H
ATOM	6050	O	HOH	H	86	75.872	21.668	2.499	1.00	39.37	H
ATOM	6051	O	HOH	H	87	52.567	14.010	7.270	1.00	34.20	H
ATOM	6052	O	HOH	H	88	69.016	32.569	12.651	1.00	36.96	H
ATOM	6053	O	HOH	H	89	96.637	25.945	31.742	1.00	37.26	H
ATOM	6054	O	HOH	H	90	34.496	-12.998	8.560	1.00	22.82	H
ATOM	6055	O	HOH	H	91	113.021	48.469	17.945	1.00	47.59	H
ATOM	6056	O	HOH	H	92	34.266	25.052	23.930	1.00	31.02	H
ATOM	6057	O	HOH	H	93	51.464	31.946	19.300	1.00	15.75	H
ATOM	6058	O	HOH	H	94	80.054	50.912	15.041	1.00	25.94	H
ATOM	6059	O	HOH	H	95	40.413	-13.432	16.393	1.00	39.73	H
ATOM	6060	O	HOH	H	96	57.701	4.191	7.708	1.00	25.27	H
ATOM	6061	O	HOH	H	97	80.838	52.853	26.436	1.00	27.67	H
ATOM	6062	O	HOH	H	98	58.205	13.023	20.294	1.00	27.57	H
ATOM	6063	O	HOH	H	99	41.832	30.497	15.601	1.00	27.32	H

ATOM	6064	O	HOH H 100	72.807	29.880	11.618	1.00	28.05	H
ATOM	6065	O	HOH H 101	48.499	5.079	4.053	1.00	38.72	H
ATOM	6066	O	HOH H 102	100.679	66.408	9.019	1.00	36.21	H
ATOM	6067	O	HOH H 103	45.023	41.442	11.747	1.00	42.72	H
ATOM	6068	O	HOH H 104	83.296	63.483	-2.738	1.00	27.46	H
ATOM	6069	O	HOH H 105	85.067	29.522	34.732	1.00	35.62	H
ATOM	6070	O	HOH H 106	72.272	53.390	15.314	1.00	38.75	H
ATOM	6071	O	HOH H 107	80.600	27.688	5.225	1.00	26.04	H
ATOM	6072	O	HOH H 108	71.251	18.567	16.503	1.00	29.08	H
ATOM	6073	O	HOH H 109	88.274	65.356	19.510	1.00	26.70	H
ATOM	6074	O	HOH H 110	43.031	4.836	7.813	1.00	38.59	H
ATOM	6075	O	HOH H 111	101.304	35.384	4.755	1.00	43.53	H
ATOM	6076	O	HOH H 112	44.554	10.725	19.619	1.00	21.38	H
ATOM	6077	O	HOH H 113	115.506	34.478	5.615	1.00	46.62	H
ATOM	6078	O	HOH H 114	36.124	-25.634	9.802	1.00	42.69	H
ATOM	6079	O	HOH H 115	34.494	-33.304	20.170	1.00	61.12	H
ATOM	6080	O	HOH H 116	38.663	26.161	-2.715	1.00	31.39	H
ATOM	6081	O	HOH H 117	105.197	41.384	18.739	1.00	38.53	H
ATOM	6082	O	HOH H 118	38.437	-12.372	18.422	1.00	32.47	H
ATOM	6083	O	HOH H 119	45.430	15.732	9.556	1.00	32.39	H
ATOM	6084	O	HOH H 120	70.475	9.817	-1.029	1.00	53.38	H
ATOM	6085	O	HOH H 121	87.895	64.540	22.445	1.00	47.01	H
ATOM	6086	O	HOH H 122	39.337	36.650	16.644	1.00	25.21	H
ATOM	6087	O	HOH H 123	104.091	50.783	20.204	1.00	31.31	H
ATOM	6088	O	HOH H 124	72.528	13.825	20.909	1.00	62.81	H
ATOM	6089	O	HOH H 125	55.353	-5.411	5.747	1.00	25.46	H
ATOM	6090	O	HOH H 126	97.848	63.704	25.177	1.00	27.84	H
ATOM	6091	O	HOH H 127	89.799	75.117	14.074	1.00	49.56	H
ATOM	6092	O	HOH H 128	96.226	35.565	0.211	1.00	40.25	H
ATOM	6093	O	HOH H 129	25.125	-15.445	19.161	1.00	37.04	H
ATOM	6094	O	HOH H 130	90.627	52.974	9.649	1.00	22.70	H
ATOM	6095	O	HOH H 131	114.398	29.773	11.425	1.00	42.36	H
ATOM	6096	O	HOH H 132	69.810	89.608	-0.164	1.00	53.48	H
ATOM	6097	O	HOH H 133	99.069	30.421	4.728	1.00	31.21	H
ATOM	6098	O	HOH H 134	37.335	49.129	5.746	1.00	43.90	H
ATOM	6099	O	HOH H 135	77.753	73.821	17.600	1.00	50.43	H
ATOM	6100	O	HOH H 136	44.853	33.208	11.090	1.00	21.26	H
ATOM	6101	O	HOH H 137	88.697	80.608	-4.574	1.00	49.42	H
ATOM	6102	O	HOH H 138	62.018	-6.136	9.010	1.00	30.19	H
ATOM	6103	O	HOH H 139	35.964	-5.810	5.494	1.00	45.47	H
ATOM	6104	O	HOH H 140	73.968	65.480	8.013	1.00	43.93	H
ATOM	6105	O	HOH H 141	78.361	66.868	24.455	1.00	57.76	H
ATOM	6106	O	HOH H 142	53.527	3.199	22.332	1.00	32.95	H
ATOM	6107	O	HOH H 143	56.018	-6.530	25.205	1.00	42.75	H
ATOM	6108	O	HOH H 144	82.930	52.617	28.345	1.00	32.35	H
ATOM	6109	O	HOH H 145	28.607	-21.313	24.210	1.00	48.87	H
ATOM	6110	O	HOH H 146	86.079	41.197	35.698	1.00	36.97	H
ATOM	6111	O	HOH H 147	35.017	8.399	11.516	1.00	32.21	H
ATOM	6112	O	HOH H 148	25.864	-19.905	17.166	1.00	41.53	H
ATOM	6113	O	HOH H 149	55.504	20.659	6.959	1.00	36.63	H
ATOM	6114	O	HOH H 150	106.046	47.260	19.571	1.00	30.60	H
ATOM	6115	O	HOH H 151	108.769	26.147	5.447	1.00	48.82	H
ATOM	6116	O	HOH H 152	38.689	17.576	4.331	1.00	39.07	H
ATOM	6117	O	HOH H 153	97.787	62.580	8.740	1.00	29.61	H
ATOM	6118	O	HOH H 154	59.501	-12.817	20.769	1.00	50.36	H
ATOM	6119	O	HOH H 155	47.887	40.072	-4.641	1.00	51.05	H
ATOM	6120	O	HOH H 156	60.057	16.564	27.477	1.00	40.66	H
ATOM	6121	O	HOH H 157	67.048	27.841	20.873	1.00	39.66	H
ATOM	6122	O	HOH H 158	37.028	32.932	18.669	1.00	37.23	H
ATOM	6123	O	HOH H 159	121.780	18.693	-3.076	1.00	46.64	H
ATOM	6124	O	HOH H 160	39.196	18.091	27.271	1.00	29.99	H
ATOM	6125	O	HOH H 161	113.285	44.237	19.561	1.00	39.04	H
ATOM	6126	O	HOH H 162	43.379	27.754	19.370	1.00	27.58	H
ATOM	6127	O	HOH H 163	91.636	66.903	11.885	1.00	54.73	H
ATOM	6128	O	HOH H 164	113.381	46.844	20.020	1.00	54.22	H
ATOM	6129	O	HOH H 165	79.238	62.082	24.112	1.00	36.07	H
ATOM	6130	O	HOH H 166	27.985	32.355	18.424	1.00	36.25	H
ATOM	6131	O	HOH H 167	34.709	-10.661	20.615	1.00	9.89	H
ATOM	6132	O	HOH H 168	93.577	37.339	20.182	1.00	14.03	H
ATOM	6133	O	HOH H 169	97.912	51.662	7.309	1.00	24.22	H
ATOM	6134	O	HOH H 170	69.616	4.375	18.521	1.00	38.01	H
ATOM	6135	O	HOH H 171	80.870	25.194	6.002	1.00	21.84	H
ATOM	6136	O	HOH H 172	50.564	12.887	5.906	1.00	32.25	H
ATOM	6137	O	HOH H 173	88.207	37.288	13.919	1.00	19.68	H

ATOM	6138	O	HOH H 174	93.800	47.651	27.174	1.00	41.65	H
ATOM	6139	O	HOH H 175	52.842	0.304	25.210	1.00	28.07	H
ATOM	6140	O	HOH H 176	66.457	4.742	14.051	1.00	28.64	H
ATOM	6141	O	HOH H 177	36.948	12.416	15.109	1.00	28.66	H
ATOM	6142	O	HOH H 178	103.292	41.793	7.607	1.00	28.51	H
ATOM	6143	O	HOH H 179	86.476	36.035	9.339	1.00	27.43	H
ATOM	6144	O	HOH H 180	82.262	41.159	26.845	1.00	24.13	H
ATOM	6145	O	HOH H 181	32.348	15.030	26.400	1.00	30.06	H
ATOM	6146	O	HOH H 182	69.916	30.709	14.482	1.00	42.81	H
ATOM	6147	O	HOH H 183	48.060	10.142	26.751	1.00	49.12	H
ATOM	6148	O	HOH H 184	45.863	-9.131	37.252	1.00	43.70	H
ATOM	6149	O	HOH H 185	32.095	-3.806	34.251	1.00	41.46	H
ATOM	6150	O	HOH H 186	108.258	31.975	8.914	1.00	33.62	H
ATOM	6151	O	HOH H 187	99.465	64.293	8.210	1.00	54.43	H
ATOM	6152	O	HOH H 188	74.677	30.785	27.841	1.00	28.20	H
ATOM	6153	O	HOH H 189	44.953	0.968	35.892	1.00	32.25	H
ATOM	6154	O	HOH H 190	88.523	27.792	36.268	1.00	30.83	H
ATOM	6155	O	HOH H 191	37.736	8.611	11.729	1.00	38.92	H
ATOM	6156	O	HOH H 192	35.988	45.178	12.964	1.00	33.85	H
ATOM	6157	O	HOH H 193	77.222	68.027	1.401	1.00	27.02	H
ATOM	6158	O	HOH H 194	63.326	-8.764	15.926	1.00	38.46	H
ATOM	6159	O	HOH H 195	109.635	61.489	27.644	1.00	52.79	H
ATOM	6160	O	HOH H 196	101.299	67.528	11.319	1.00	38.92	H
ATOM	6161	O	HOH H 197	77.295	56.116	25.768	1.00	36.83	H
ATOM	6162	O	HOH H 198	81.538	22.288	0.320	1.00	47.08	H
ATOM	6163	O	HOH H 199	55.989	3.900	0.756	1.00	46.35	H
ATOM	6164	O	HOH H 200	66.200	40.514	17.513	1.00	43.54	H
ATOM	6165	O	HOH H 201	40.497	-1.046	9.238	1.00	27.84	H
ATOM	6166	O	HOH H 202	57.171	27.504	8.258	1.00	52.74	H
ATOM	6167	O	HOH H 203	44.592	-6.430	37.531	1.00	37.55	H
ATOM	6168	O	HOH H 204	26.892	-1.642	9.494	1.00	55.58	H
ATOM	6169	O	HOH H 205	83.350	58.389	2.759	1.00	46.24	H
ATOM	6170	O	HOH H 206	112.353	45.284	9.770	1.00	30.99	H
ATOM	6171	O	HOH H 207	86.315	23.927	16.100	1.00	41.36	H
ATOM	6172	O	HOH H 208	67.053	45.396	12.396	1.00	31.02	H
ATOM	6173	O	HOH H 209	111.609	60.418	8.362	1.00	52.01	H
ATOM	6174	O	HOH H 210	91.254	47.553	32.752	1.00	41.71	H
ATOM	6175	O	HOH H 211	88.489	39.944	11.117	1.00	34.00	H
ATOM	6176	O	HOH H 212	104.972	69.233	16.415	1.00	37.26	H
ATOM	6177	O	HOH H 213	23.462	39.893	6.692	1.00	56.45	H
ATOM	6178	O	HOH H 214	84.114	54.447	-1.718	1.00	42.58	H
ATOM	6179	O	HOH H 215	105.045	66.068	22.775	1.00	24.48	H
ATOM	6180	O	HOH H 216	85.378	52.388	17.025	1.00	37.91	H
ATOM	6181	O	HOH H 217	91.411	30.837	4.259	1.00	23.59	H
ATOM	6182	O	HOH H 218	99.019	37.803	25.178	1.00	37.20	H
ATOM	6183	O	HOH H 219	88.866	41.183	35.781	1.00	42.88	H
ATOM	6184	O	HOH H 220	66.946	25.931	12.530	1.00	45.53	H
ATOM	6185	O	HOH H 221	83.809	61.544	-0.645	1.00	32.51	H
ATOM	6186	O	HOH H 222	91.766	28.386	3.286	1.00	29.97	H
ATOM	6187	O	HOH H 223	83.302	45.674	11.423	1.00	40.65	H
ATOM	6188	O	HOH H 224	59.198	3.628	18.904	1.00	22.61	H
ATOM	6189	O	HOH H 225	34.553	-11.852	5.930	1.00	29.77	H
ATOM	6190	O	HOH H 226	88.953	22.712	24.560	1.00	23.54	H
ATOM	6191	O	HOH H 227	108.379	54.102	21.160	1.00	30.79	H
ATOM	6192	O	HOH H 228	44.957	16.820	6.827	1.00	37.14	H
ATOM	6193	O	HOH H 229	105.872	50.217	22.393	1.00	33.77	H
ATOM	6194	O	HOH H 230	40.390	52.287	-1.729	1.00	62.00	H
ATOM	6195	O	HOH H 231	103.837	27.586	24.806	1.00	50.76	H
ATOM	6196	O	HOH H 232	50.931	9.397	25.207	1.00	40.65	H
ATOM	6197	O	HOH H 233	64.739	2.382	27.973	1.00	46.98	H
ATOM	6198	O	HOH H 234	38.363	0.460	8.402	1.00	28.58	H
ATOM	6199	O	HOH H 235	73.577	50.129	18.561	1.00	36.68	H
ATOM	6200	O	HOH H 236	100.912	58.519	6.876	1.00	36.99	H
ATOM	6201	O	HOH H 237	100.664	26.841	26.380	1.00	36.27	H
ATOM	6202	O	HOH H 238	82.528	48.080	12.484	1.00	44.97	H
ATOM	6203	O	HOH H 239	70.870	44.782	13.746	1.00	26.53	H
ATOM	6204	O	HOH H 240	71.914	-9.049	17.302	1.00	59.29	H
ATOM	6205	O	HOH H 241	28.024	9.146	32.377	1.00	43.91	H
ATOM	6206	O	HOH H 242	55.531	-2.470	4.880	1.00	50.20	H
ATOM	6207	O	HOH H 243	63.362	16.623	21.334	1.00	30.95	H
ATOM	6208	O	HOH H 244	71.813	27.548	12.914	1.00	54.77	H
ATOM	6209	O	HOH H 245	22.793	-3.930	12.731	1.00	39.10	H
ATOM	6210	O	HOH H 246	73.087	44.091	34.124	1.00	47.86	H
ATOM	6211	O	HOH H 247	48.717	31.774	19.850	1.00	33.46	H

ATOM	6212	O	HOH H 248	100.851	61.218	7.741	1.00	35.49	H
ATOM	6213	O	HOH H 249	116.291	47.311	12.227	1.00	49.67	H
ATOM	6214	O	HOH H 250	99.469	40.748	22.418	1.00	25.82	H
ATOM	6215	O	HOH H 251	52.271	4.031	24.614	1.00	44.68	H
ATOM	6216	O	HOH H 252	106.629	40.298	32.271	1.00	59.44	H
ATOM	6217	O	HOH H 253	45.587	-9.303	3.049	1.00	26.81	H
ATOM	6218	O	HOH H 254	52.547	-9.432	27.670	1.00	45.08	H
ATOM	6219	O	HOH H 255	75.854	21.157	27.640	1.00	42.33	H
ATOM	6220	O	HOH H 256	82.119	63.444	23.430	1.00	37.84	H
ATOM	6221	O	HOH H 257	104.091	38.660	18.936	1.00	30.29	H
ATOM	6222	O	HOH H 258	79.477	56.121	8.190	1.00	39.16	H
ATOM	6223	O	HOH H 259	101.351	32.257	5.631	1.00	29.94	H
ATOM	6224	O	HOH H 260	93.989	23.313	31.488	1.00	35.30	H
ATOM	6225	O	HOH H 261	28.754	-1.723	6.977	1.00	36.90	H
ATOM	6226	O	HOH H 262	93.007	48.370	9.901	1.00	49.06	H
ATOM	6227	O	HOH H 263	82.990	88.137	9.529	1.00	39.70	H
ATOM	6228	O	HOH H 264	118.031	51.582	0.542	1.00	36.21	H
ATOM	6229	O	HOH H 265	21.682	15.046	11.602	1.00	62.29	H
ATOM	6230	O	HOH H 266	34.210	24.576	5.314	1.00	18.89	H
ATOM	6231	O	HOH H 267	85.829	40.095	14.911	1.00	25.26	H
ATOM	6232	O	HOH H 268	102.070	38.308	21.059	1.00	41.79	H
ATOM	6233	O	HOH H 269	41.071	-2.346	7.039	1.00	38.87	H
ATOM	6234	O	HOH H 270	68.717	3.686	16.083	1.00	37.79	H
ATOM	6235	O	HOH H 271	27.094	-12.649	12.753	1.00	29.26	H
ATOM	6236	O	HOH H 272	36.426	24.744	4.145	1.00	45.88	H
ATOM	6237	O	HOH H 273	88.670	31.858	5.525	1.00	39.43	H
ATOM	6238	O	HOH H 274	90.819	38.524	36.028	1.00	30.15	H
ATOM	6239	O	HOH H 275	90.790	49.861	10.317	1.00	39.97	H
ATOM	6240	O	HOH H 276	77.026	11.969	13.970	1.00	44.87	H
ATOM	6241	O	HOH H 277	36.555	12.078	12.344	1.00	40.47	H
ATOM	6242	O	HOH H 278	52.331	7.302	24.972	1.00	49.30	H
ATOM	6243	O	HOH H 279	92.612	33.229	3.564	1.00	40.55	H
ATOM	6244	O	HOH H 280	83.546	64.142	25.612	1.00	50.28	H
ATOM	6245	O	HOH H 281	28.206	-1.891	36.868	1.00	44.06	H
ATOM	6246	O	HOH H 282	93.185	20.914	30.917	1.00	44.51	H
ATOM	6247	O	HOH H 283	98.176	41.763	24.500	1.00	44.20	H
ATOM	6248	O	HOH H 284	29.174	-0.123	4.304	1.00	46.75	H
ATOM	6249	O	HOH H 285	79.206	77.643	14.919	1.00	30.21	H
ATOM	6250	O	HOH H 286	90.531	26.085	37.436	1.00	36.96	H
ATOM	6251	O	HOH H 287	55.726	0.396	21.054	1.00	49.55	H
ATOM	6252	O	HOH H 288	111.246	30.915	19.699	1.00	42.91	H
ATOM	6253	O	HOH H 289	77.000	58.921	5.300	1.00	47.04	H
ATOM	6254	O,	HOH H 290	34.339	-9.458	5.288	1.00	25.50	H
ATOM	6255	O	HOH H 291	109.784	29.168	15.534	1.00	45.96	H
ATOM	6256	O	HOH H 292	93.674	48.853	29.650	1.00	48.76	H
ATOM	6257	O	HOH H 293	92.299	47.066	3.801	1.00	37.41	H
ATOM	6258	O	HOH H 294	110.965	23.141	11.799	1.00	42.97	H
ATOM	6259	O	HOH H 295	90.562	45.235	33.919	1.00	33.83	H
ATOM	6260	O	HOH H 296	57.772	-10.500	25.018	1.00	49.78	H
ATOM	6261	O	HOH H 297	54.676	36.195	11.362	1.00	54.22	H
ATOM	6262	O	HOH H 298	107.263	59.234	5.282	1.00	56.05	H
ATOM	6263	O	HOH H 299	70.560	48.918	1.476	1.00	49.72	H
ATOM	6264	O	HOH H 300	84.037	38.916	5.971	1.00	39.33	H
ATOM	6265	O	HOH H 301	86.468	41.381	11.971	1.00	45.69	H
ATOM	6266	O	HOH H 302	24.400	11.569	23.610	1.00	36.73	H
ATOM	6267	O	HOH H 303	73.087	79.808	7.028	1.00	46.20	H
ATOM	6268	O	HOH H 304	72.681	43.116	14.941	1.00	51.84	H
ATOM	6269	O	HOH H 305	84.844	42.198	15.611	1.00	26.23	H
ATOM	6270	O	HOH H 306	54.135	19.007	24.978	1.00	27.41	H
ATOM	6271	O	HOH H 307	67.044	10.459	18.465	1.00	44.92	H
ATOM	6272	O	HOH H 308	82.262	49.436	14.864	1.00	39.04	H
ATOM	6273	O	HOH H 309	114.093	50.994	16.895	1.00	43.32	H
ATOM	6274	O	HOH H 310	64.428	3.092	30.590	1.00	43.29	H
ATOM	6275	O	HOH H 311	81.152	70.187	18.656	1.00	34.21	H
ATOM	6276	O	HOH H 312	74.596	81.584	-2.515	1.00	55.00	H
ATOM	6277	O	HOH H 313	61.161	25.774	22.464	1.00	32.98	H
ATOM	6278	O	HOH H 314	53.149	-7.019	4.754	1.00	26.01	H
ATOM	6279	O	HOH H 315	44.571	8.317	33.567	1.00	40.32	H
ATOM	6280	O	HOH H 316	82.293	49.769	10.587	1.00	35.22	H
ATOM	6281	O	HOH H 317	48.467	8.859	24.614	1.00	42.38	H
ATOM	6282	O	HOH H 318	56.588	-8.027	4.728	1.00	44.65	H
ATOM	6283	O	HOH H 319	31.280	-23.239	26.551	1.00	42.45	H
ATOM	6284	O	HOH H 320	82.483	40.137	7.719	1.00	39.22	H
ATOM	6285	O	HOH H 321	82.063	19.937	23.440	1.00	35.69	H

ATOM	6286	O	HOH	H	322	106.025	63.366	22.616	1.00 31.93	H
ATOM	6287	O	HOH	H	323	46.181	9.890	8.669	1.00 38.11	H
ATOM	6288	O	HOH	H	324	71.708	75.568	6.998	1.00 41.82	H
ATOM	6289	O	HOH	H	325	108.280	34.405	3.851	1.00 30.72	H
ATOM	6290	O	HOH	H	326	32.275	40.921	14.635	1.00 40.72	H
ATOM	6291	O	HOH	H	327	37.556	15.785	5.690	1.00 42.29	H
ATOM	6292	O	HOH	H	328	85.569	33.598	37.182	1.00 31.78	H
ATOM	6293	O	HOH	H	329	33.070	-11.287	23.137	1.00 48.90	H
ATOM	6294	O	. HOH	H	330	87.593	16.513	19.683	1.00 45.53	H
ATOM	6295	O	HOH	H	331	116.176	53.631	17.853	1.00 39.81	H
ATOM	6296	O	HOH	H	332	26.940	-11.377	14.930	1.00 39.40	H
ATOM	6297	O	HOH	H	333	60.033	28.679	22.456	1.00 32.84	H
ATOM	6298	O	HOH	H	334	52.472	15.182	2.562	1.00 48.72	H
ATOM	6299	O	HOH	H	335	84.377	54.588	4.646	1.00 40.99	H
ATOM	6300	O	HOH	H	336	115.759	67.454	19.970	1.00 46.15	H
ATOM	6301	O	HOH	H	337	88.969	52.684	25.112	1.00 42.31	H
ATOM	6302	O	HOH	H	338	36.351	12.852	9.875	1.00 37.11	H
ATOM	6303	O	HOH	H	339	97.702	31.578	2.653	1.00 49.82	H
ATOM	6304	O	HOH	H	340	53.964	-6.543	26.981	1.00 35.52	H
ATOM	6305	O	HOH	H	341	24.475	-17.438	17.094	1.00 38.04	H
ATOM	6306	O	HOH	H	342	58.530	0.915	19.036	1.00 43.08	H
ATOM	6307	O	HOH	H	343	77.156	37.203	39.025	1.00 48.54	H
ATOM	6308	O	HOH	H	344	49.978	-1.361	0.435	1.00 39.48	H
ATOM	6309	O	HOH	H	345	53.900	37.104	13.703	1.00 47.74	H
ATOM	6310	O	HOH	H	346	77.886	49.625	13.575	1.00 57.13	H
ATOM	6311	O	HOH	H	347	57.053	8.721	0.570	1.00 50.38	H
ATOM	6312	O	HOH	H	348	96.803	63.745	10.854	1.00 41.14	H
ATOM	6313	O	HOH	H	349	89.009	70.808	11.906	1.00 45.67	H
ATOM	6314	O	HOH	H	350	66.363	22.353	8.221	1.00 42.47	H
ATOM	6315	O	HOH	H	351	52.578	25.044	8.541	1.00 41.16	H
ATOM	6316	O	HOH	H	352	81.789	73.640	-3.536	1.00 50.48	H
ATOM	6317	O	HOH	H	353	67.632	-11.181	13.891	1.00 48.24	H
ATOM	6318	O	HOH	H	354	41.357	-5.652	22.367	1.00 14.47	H
ATOM	6319	C1	EDO	G	501	37.685	-5.096	30.876	1.00 23.96	G
ATOM	6320	O1	EDO	G	501	38.224	-4.213	31.883	1.00 23.38	G
ATOM	6321	C2	EDO	G	501	38.742	-6.046	30.406	1.00 25.29	G
ATOM	6322	O2	EDO	G	501	39.062	-6.931	31.464	1.00 26.30	G
ATOM	6323	C1	EDO	G	502	89.146	26.377	27.000	1.00 41.69	G
ATOM	6324	O1	EDO	G	502	88.631	26.508	28.343	1.00 51.10	G
ATOM	6325	C2	EDO	G	502	88.436	25.261	26.303	1.00 43.14	G
ATOM	6326	O2	EDO	G	502	88.726	24.052	26.967	1.00 41.73	G
ATOM	6327	C1	EDO	G	503	85.093	31.920	30.633	1.00 21.00	G
ATOM	6328	O1	EDO	G	503	85.283	30.597	31.203	1.00 18.65	G
ATOM	6329	C2	EDO	G	503	83.846	32.561	31.186	1.00 19.69	G
ATOM	6330	O2	EDO	G	503	84.148	33.101	32.454	1.00 20.94	G
ATOM	6331	C1	EDO	G	504	34.956	3.907	25.885	1.00 38.01	G
ATOM	6332	O1	EDO.G	504		33.976	2.838	25.869	1.00 36.69	G
ATOM	6333	C2	EDO	G	504	36.360	3.344	25.982	1.00 39.84	G
ATOM	6334	O2	EDO	G	504	36.573	2.396	24.935	1.00 33.51	G
END										

Example 4

[91]   Binding of altered gluten peptides (peptide analogs) to MHC molecules is assayed with purified HLA molecules. Binding of labeled peptide to purified HLA DQ2 molecules can be measured as described by Johansen et al. (1996) Int Immmunol (8), 177-82. Briefly, purified DQ2 molecules (50 - 1000 nM) are incubated with the 125-I radiolabeled indicator peptide (MB 65kDa 243-255Y, sequence KPLLIIAEDVEGEY; 20 000 cpm, 1-5 nM) at pH 4.9. After incubation for 24 hours, the peptide bound to DQ2 and the non-bound peptide are separated on Sephadex G25 superfine spun columns. The radioactivity in the bound and non-bound fractions was counted in a gamma-counter, and the fraction of peptide bound to DQ2 (cpm in the bound fraction/total cpm recovered) is calculated. The binding capacities of the peptide binding inhibitors are assayed by testing their ability to inhibit the binding of the labeled indicator peptide. The concentration required to give 50%

inhibition (IC_{50}) is calculated. Since the level of IC_{50} may vary between separate titration experiments, the IC_{50} values are compared to the IC_{50} of a reference peptide by determining the relative binding capacity (RBC), which is the ratio: IC_{50} of reference peptide / IC_{50} of test compound. HLA-DQ2 molecules can be isolated by antibody affinity chromatography from lysates of HLA-DQ2 homozygous Epstein Barr virus transformed B-lymphoblastoid cell lines (detergent solubilized) or from water soluble, recombinant molecules produced similarly as described in Example 3 above. The recombinant molecules can be made with or without covalently linked peptide and with a biotin recognition sequence at the C-terminal end of the β-subunit that facilitates adsorption of HLA-DQ2 to several streptavidin coated supports, thereby enabling alternative ways for measurement of IC_{50i}. A peptide analog with an IC_{50} value of less than 100 μM is suitable for further screenings.

[92]   Alternatively, binding of altered gluten peptides to HLA-DQ2 can also be assayed using the soluble DQ2 heterodimer produced as described in Example 3 above. The presence of the biotin recognition sequence at the C-terminal end of the β-subunit facilitates adsorption of HLA-DQ2 to several streptavidin coated supports, thereby enabling measurement of IC_{50} or K_i.

[93]   Candidate peptide analogs are further tested for their ability to inhibit proliferation of T cells specific for gluten peptides.   This is done by using HLA-DQ2 restricted T cell clones (TCC) and glutaraldehyde fixed antigen presenting cells (e.g. Epstein Barr virus transformed B-lymphoid transformed cells) expressing HLA-DQ2. The antigen presenting cells are pelleted and resuspended in RPMI containing 0.05% glutaraldehyde for 90 sec, whereafter glycin to a final concentration of 0.2 M is added for 60 sec. The cells are then washed, counted, and resuspended in PBS or PBS buffered with citrate phosphate to a final pH of 4.9. The fixed APC are incubated overnight with various concentrations of peptides. The inhibitory peptides are usually added 30 min prior to the stimulatory peptide. The antigen presenting cells are then washed twice and resuspended in culture medium of RPMI-1640 supplemented with 15% v/v heat inactivated pooled human serum and the T cells are added. The experiments are performed in triplicates of 3-5 X 10^4 TCC with 5 X 10^4 fixed APC and various titrations of inhibitory and stimulatory peptides. Following an incubation period of 48 hours, each culture is pulsed with [^{3}H]-thymidine for an additional 12-18 hours. Cultures are then harvested on fiberglass filters and counted as above. Mean CPM and standard error of the mean are calculated from data determined in triplicate cultures. Peptide analogs that inhibit proliferation to approximately 25% at a concentration of 50 μM or greater are suitable for further screening.

[94]   All publications and patent applications cited in this specification are herein incorporated by reference as if each individual publication or patent application were specifically and individually indicated to be incorporated by reference.

[95]   Although the foregoing invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it will be readily apparent to those of ordinary skill in the art in light of the teachings of this invention that certain changes and modifications may be made thereto without departing from the spirit or scope of the appended claims.

WHAT IS CLAIMED IS:

1.   An HLA-binding peptide inhibitor, wherein said inhibitor is an analog of an immunogenic gluten oligopeptide of at least about 8 residues in length, wherein the immunogenic gluten oligopeptide is altered by the replacement of one or more amino acids; and wherein said analog binds tightly to HLA molecules; is proteolytically stable; and does not activate disease-specific T cells.

2.   The HLA-binding peptide inhibitor of Claim 1, wherein said analog comprises one or more naturally occurring amino acids, non-naturally occurring amino acids, modified amino acids, or amino acid mimetics.

3.   The HLA-binding peptide inhibitor of Claim 2, wherein said analog is further derivatized to reduce the affinity of the analog for disease-specific T cell receptors.

4.   The HLA-binding peptide inhibitor of Claim 1, wherein said immunogenic gluten oligopeptides comprises at least one PXP motif.

5.   The HLA-binding peptide inhibitor of Claim 1, wherein said immunogenic gluten oligopeptides comprises a sequence selected from the group consisting · of: PQPELPY; PFPQPELPYP, PQPELPYPQPQLP, PQQSFPEQQPP, VQGQGIIQPEQPAQ, FPEQPQQPYPQQP, FPQQPEQPYPQQP, FSQPEQEFPQPQ; PFPQPQLPY, PQPQLPYPQ, PFPQPELPY; PYPQPELPY and PYPQPQLPY.

[96]   6.   The HLA-binding peptide inhibitor of Claim 1, wherein said inhibitor comprises the sequence PXPQPELPY, where X is Tyr, Trp, Arg, Lys, p-iodo-Phe, 3-iodo-Tyr, p-amino-Phe, 3-amino-Tyr, hydroxylysine, ornithine, Asp or Glu.

7.   The HLA-binding peptide inhibitor of Claim 6, wherein said inhibitor is further derivatized to reduce the affinity of the analog for disease-specific T cell receptors.

8.   The HLA-binding peptide inhibitor of Claim 6, wherein said inhibitor is further modified to increase binding potency to an MHC molecule.

9.   The HLA-binding peptide inhibitor of Claim 1, wherein said inhibitor comprises the sequence $PFPQX_1ELX_2Y$, where X_1 and X_2 are independently selected from 4-hydroxy-Pro, 4-amino-Pro, or 3-hydroxy-Pro, and proline, with the proviso that at least one of X_1 and X_2 is a residue other than proline

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10.   The HLA-binding peptide inhibitor of Claim 9, wherein said inhibitor is further derivatized to reduce the affinity of the analog for disease-specific T cell receptors.

11.   The HLA-binding peptide inhibitor of Claim 9, wherein said inhibitor is further modified to increase binding potency to an MHC molecule.

12.   A method of treating Celiac Sprue and/or dermatitis herpetiformis, the method comprising:
        administering to a patient an effective dose of an HLA-binding peptide inhibitor;
        wherein said HLA-binding peptide inhibitor attenuates gluten toxicity in said patient.

13.   The method of Claim 12, wherein said HLA-binding peptide inhibitor is administered with a glutenase.

14.   The method according to Claim 12, wherein said HLA-binding peptide inhibitor is administered orally.

15.   The method according to Claim 12, wherein said HLA-binding peptide inhibitor is contained in a formulation that comprises an enteric coating.

16.   A formulation for use in treatment of Celiac Sprue and/or dermatitis herpetiformis, comprising:
        an effective dose of an HLA-binding peptide inhibitor and a pharmaceutically acceptable excipient.

17.   The formulation according to Claim 16, further comprising an enteric coating.

18.   Use of an HLA-binding peptide inhibitor in the treatment of HLA-DQ2 positive individuals who are either pre-disposed to type I diabetes or have developed symptoms of type I diabetes.

19.   A computer for producing a three-dimensional representation of a molecule wherein said molecule comprises an HLA-DQ2 molecule bound to an immunogenic gluten oligopeptide, wherein said computer comprises:
        a machine-readable data storage medium comprising a data storage material encoded with machine-readable data, wherein said data comprises the three-dimensional coordinates of a subset of the atoms in an HLA-DQ2 molecule bound to an immunogenic

gluten oligopeptide;

a working memory for storing instructions for processing said machine-readable data;

a central-processing unit coupled to said working memory and to said machine-readable data storage medium for processing said machine readable data into said three-dimensional representation; and

a display coupled to said central-processing unit for displaying said three-dimensional representation.

20.   A computer-assisted method for identifying potential modulators of Celiac Sprue and/or dermatitis herpetiformis, using a programmed computer comprising a processor, a data storage system, an input device, and an output device, comprising the steps of:

(a) inputting into the programmed computer through said input device data comprising the three-dimensional coordinates of a subset of the atoms in an HLA-DQ2 molecule bound to an immunogenic gluten oligopeptide, thereby generating a criteria data set;

(b) comparing, using said processor, said criteria data set to a computer database of chemical structures stored in said computer data storage system;

(c) selecting from said database, using computer methods, chemical structures having a portion that is structurally similar to said criteria data set;

(d) outputting to said output device the selected chemical structures having a portion similar to said criteria data set.